

4th Asian Paediatric ORL Congress & 5th Malaysian International ORL-HNS Congress

In conjunction with

33RD ANNUAL GENERAL MEETING
 OF THE MALAYSIAN SOCIETY OF
 OTORHINOLARYNGOLOGISTS –
 HEAD AND NECK SURGEONS

“Issues & Updates :
 From Infancy to Adulthood”

**15th to 18th
 MAY 2013**

Shangri-La Hotel
 Kuala Lumpur
MALAYSIA

Organised by



Malaysian Society of
 Otorhinolaryngologists –
 Head and Neck Surgeons
 (MSO-HNS)

In collaboration with



Asian Paediatric
 ORL Group

Supported by



WINNERS OF MSO-HNS AWARDS (MAY 2013)

MSO-HNS Long Service Award	Ravindran P M Menon
MSO-HNS Outstanding Public and Healthcare Services Award (OPHSA)	Abdul Hakim Jaafar
MSO-HNS Meritorious Service Award	Hj Md Husain Bin Hj Said
Marhakim Award	Aneeza Khairiyah W Hamizan
UMMI-Karl Storz Award	Saleh Khaled Aboud

WINNERS OF MSO-HNS Annual Scientific Meeting (APRIL 2013)

RESIDENT CATEGORY

First Prize

Mawaddah Bt Azman

Randomized Controlled Trial On Effects Of Glutamine Plus Supplementation In Surgical Patients With Head And Neck Malignancy In PPUKM

Second Prize

Shamina Sara Moses

A Study Of Effectiveness Of Autofluorescence Endoscopy In Diagnosing Upper Aerodigestive Tract Tumours

Third Prize

Siti Zulaili binti Zulkepli

Insulin Resistance In Patient With Obstructive Sleep Apnea: A Cross Sectional Study

SPECIALIST CATEGORY

First Prize

Sarmad Alazzawi

Radiological Analysis Of The Ethmoid Roof In The Malaysian Population

Second Prize

Roslenda Abd Rahman

Recovery Of Facial Nerve Function In Temporal Bone Trauma After Surgical Exploration: A 10-Years Experience

Third Prize

Aneeza Khairiyah Wan Hamizan

The Role Of Middle Meatus Antrostomy In Treatment Of Antrochoanal Polyp

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Message from the Director-General of Health Malaysia



"Selamat Datang" to all delegates.

I wish to extend my heartiest congratulations and appreciation to the Malaysian Society of Otorhinolaryngologists – Head & Neck Surgeons (MSO- HNS) for organising the 4th Asian Paediatric ORL Congress and 5th Malaysian International ORL-HNS Congress. This is in conjunction with the 33rd Annual General Meeting of the MSO-HNS and the launch of the Clinical Practice Guidelines on Management of Otitis Media with Effusion in Children. The theme for this congress "Issues & Updates: From Infancy to Adulthood" is relevant to a growing population like Malaysia and Asia.

MSO-HNS is known to be among active professional medical societies in Malaysia especially in organising various seminars or congresses in medical education. Therefore, I would like to congratulate the Asian Paediatric Otorhinolaryngology (ORL) Group on the success in organising this congress. On behalf of the Ministry of Health Malaysia, I would also like to thank all members of the Asian Paediatric ORL Group for choosing Malaysia as the host country this year. I am indeed happy to know that this congress is attended by a wide range of experienced and distinguished experts in the field.

I hope this congress will serve as an important platform for all of us, around the world to share experience and knowledge. Thank you and congratulation again to the organising committee and I wish all of you a fruitful meeting.

Thank you.

A handwritten signature in black ink, appearing to read "Hisham Abdullah". The signature is fluid and cursive.

Datuk Dr Noor Hisham Abdullah
Director-General of Health Malaysia

Message from the President of MSO-HNS



On behalf of the Malaysian Society of Otorhinolaryngologists – Head & Neck Surgeons (MSO-HNS), it is my pleasure to welcome you to Kuala Lumpur for the 4th Asian Paediatric Otorhinolaryngology Congress and the 5th Malaysian International ORL-HNS Congress organised in conjunction with the 33rd Annual General Meeting of the MSO-HNS at the Shangri-La Hotel, Kuala Lumpur, from 15th – 18th May 2013. The theme of this Congress is “Issues and Updates: From Infancy to Adulthood”.

An important objective of the MSO-HNS is the continuing professional development of our members, and the annual scientific congresses have always provided excellent opportunities for the members to update themselves in matters pertaining to Ear, Nose & Throat-Head & Neck diseases.

This Congress marks another milestone in the success of our Society. We have progressed tremendously in our activities and today we stand proud in organising international meetings actively.

As the President of the MSO-HNS, I would like to express my warmest gratitude to those who have been involved, in one way or another, with the organisation of the Congress. I am honoured to be elected as the President of this Society and it gives me confidence and vigor to work with dedicated members who have worked hard to make this meeting a success. I would like to express my heartfelt thanks to the Organizing Committee members and all sponsors for their selfless contributions and hard work to this prestigious meeting.

The Organising Committee has put together an interesting and comprehensive scientific and social programmes which promises to be both exciting and stimulating to each and every delegate. It is our aim to make this event to be of high scientific merit and a friendly gathering of old friends and new acquaintances.

We wish you all an unforgettable stay in Kuala Lumpur!

A handwritten signature in black ink, appearing to read 'Primuharsa'.

Prof Dr Primuharsa Putra bin Sabir Husin Athar

President,

Malaysian Society of Otorhinolaryngologists - Head & Neck Surgeons (2012-2013)

Welcome Message from the President of Asian Paediatric Otolaryngology Group



On behalf of the Asian Paediatric Otolaryngology Group, I would like to extend a warm welcome to the invited speakers and all distinguished guest and participants attending the 4th Asian Paediatric Congress organised in collaboration with the Malaysian Society of Otorhinolaryngologists – Head & Neck Surgeons (MSO-HNS). The Asian Paediatric ORL Group is both honoured and privileged to be involved with MSO-HNS. Our sincere thanks and gratitude go to Dr Primuharsa Putra, President, and all members of the Society.

My special thanks also to all the founding members of the Asian Paediatric ORL Group who have contributed to this Congress.

The Organising Committee under the able chairmanship of Associate Professor Dr Goh Bee See; Organising Secretary Dr Revadi Govindaraju, and the the rest of the Organising Committee has planned an elaborate scientific programme on the theme "Issues and Updates: From Infancy to Adulthood". The scientific program promised to be interesting, stimulating and endeavor to address issues related to Paediatric with Otolaryngology focus that concern all ENT Surgeons, Paediatricians, Surgeons and other practicing doctors as a whole throughout the Asian region.

The attainment of the aforesaid events should be one of the most satisfying achievements for Malaysia. I would like to record my appreciation to all our invited speakers for sharing with us their invaluable time and expertise. Beside the scientific aspect of the program, the Organising Committee has also drawn up social programs to make this special Congress memorable with a Malaysian flavour.

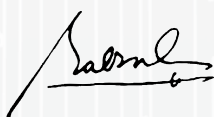
I am confident that the mission of this event to enlighten doctors throughout this region with the latest knowledge in Otolaryngology among the Paediatric age group will be achieved through the dissemination of updated knowledge and latest discoveries through research. We acknowledge the work of all the great academicians and clinicians who have contributed to this conference which is certainly based upon the highest national and international standards.

Last but not least, the conference would not have been possible without the kind assistance and support we have received from all our sponsors and also our participating delegates.

May I offer my felicitations and wish you all a happy and memorable stay in Kuala Lumpur, Malaysia.

Once again, *Selamat datang* and have a good meeting.

Thank you



Datin Dr Siti Sabzah Mohd Hashim
President, Asian Paediatric Otolaryngology Group &
Congress Advisor, Asian Paediatric Otolaryngology

Message from the Organising Chairperson



"SELAMAT DATANG"

On behalf of the Organising Committee, it gives me great pleasure to welcome all of you to Kuala Lumpur. Malaysia is honored to host the 4th Asian Paediatric Otorhinolaryngology Congress for the first time at the Shangri-La Hotel, Kuala Lumpur from 15th to 18th May 2013. The Malaysian Society of Otorhinolaryngologists – Head & Neck Surgeons (MSO-HNS) is privileged to organise this event in conjunction with the 5th Malaysian International ORL-HNS Congress and the 33rd Annual General Meeting of the MSO-HNS.

We have assembled several world renowned faculty in addition to the Asian key speakers. We are also not short of Malaysian speakers to add local flavours to the Congress. The Organising Committee has put in a lot of efforts to organise pre-congress and post-congress workshops to allow hands-on sessions for the delegates in addition to the three-day scientific programme. These are made possible because of the good cooperation of the MSO-HNS with the local universities. There are also free paper and poster presentations to give opportunity to all delegates to share their knowledge in clinical and research outcome at their institutions. This may serve a platform for future collaboration especially in the Asian region which share common diseases and management.

I would like to take this opportunity to thank the Organising Committee members for their tireless effort and precious time spent to ensure a successful and fruitful congress. I also wish to thank all of the industries for their continuous and generous support in scientific activities of the MSO-HNS to make this event possible.

I wish all delegates a successful meeting and a memorable stay in Malaysia. I also hope you have time to enjoy the beautiful city of Kuala Lumpur and enjoy our Malaysian multi-cultural hospitality.

"Terima kasih" and have a great time.

A handwritten signature in black ink, appearing to read 'Goh Bee-See'.

Assoc Prof Dr Goh Bee-See

Organising Chairperson,

4th Asian Paediatric ORL Congress & 5th Malaysian International ORL-HNS Congress

Organising Committee

MSO-HNS PRESIDENT

Prof Dr Primuharsa Putra Bin Sabir Husin Athar

CONGRESS ADVISOR/ MALAYSIAN COORDINATOR FOR ASIAN PAEDIATRIC OTOLARYNGOLOGY GROUP

Datin Dr Siti Sabzah Mohd Hashim

ORGANISING CHAIRPERSON

Assoc Prof Dr Goh Bee-See

HON SECRETARY

Dr Revadi Govindaraju

HON TREASURER

Dr Avatar Singh

Scientific Committee

Dr Anura Michelle Manuel (*Chairperson*)

Otology

Assoc Prof Dr Mazita Ami
Dr Shailendra Sivalingam
Dr Lina Ling Chooi

Rhinology

Prof Dr Prepageran Narayanan
Dr Pathma Letchumanan
Dr Rekha Balachandran

Head and Neck & Laryngology

Assoc Prof Dr Mohd Razif
Mohamad Yunus
Dr Saraiza Bt Abu Bakar

Abstracts

Prof Dr Aminuddin Saim
Assoc Prof Dr Mohd Khairi Md
Daud
Dr Aneeza Khairiyah W
Hamizan

Spouse Programme

Dr Sushil Brito-Mutunayagam
Dr Shahrul Hitam

Gala Dinner

Dr Revadi Govindaraju
Dr Halimuddin Bin Sawali

Golf

Dr Halimuddin Bin Sawali

Opening Ceremony

Dr Saraiza Bt Abu Bakar
Dr Kong Min-Han

COURSE DIRECTORS

Paediatric Airway
Harmonic Scalpel in ENT Practice
Otology Implant
Tracheostomy
BAHA

Assoc Prof Dr Goh Bee-See
Assoc Prof Dr Mohd Razif Mohamad Yunus
Dr Mohd Zulkiflee Bin Abu Bakar
Dr Avatar Singh
Assoc Prof Dr Goh Bee-See

Invited Faculty

Australia

Alan T L Cheng

CHINA

Yamei Zhang

GERMANY

Christian Betz

HONG KONG

Gordon Soo

INDIA

B Satyanand Shastri

INDONESIA

Retno S Wardani

PHILIPPINES

Charlotte Chiong

Eris Llanes

C Gretchen Navarro-Locsin

Maria Rina T Reyes-Quintos

SINGAPORE

Abhilash Balakrishnan

Lynne Lim H Y

Meliza Cruz

Rachel Seet Soh Cheng

Henry K K Tan

SWITZERLAND

Basil Landis

Kishore Sandu

TAIWAN

Hsu Wei-Chung

Lee Kuo-Sheng

Tsai Hsun-Tien

Wu Che-Ming

USA

Koji Kojima

Michael J Rutter

VIETNAM

Nguyen Thi Ngoc Dung

Nguyen Thi Thanh Thuy

MALAYSIA

Abdullah Sani Mohamed

Alizan Abd Kahlil

Aminuddin Saim

Amir Hamzah Abdul Latiff

Anura Michelle Manuel

Asma Abdullah

Avatar Singh

Baharuddin Abdullah

Balwinder Singh

Dayang Anita Abdul Aziz

Dipak Banarsi Dass

Farrah Hani Imran

Goh Bee-See

Hamzaini Abdul Hamid

Hari Chandran

Harvinder Singh

Iskandar Hailani

Jeevanan Jahendran

Kew Thean-Yean

Khairul Azmi Abdul Kadir

Lokman Saim

Mohd Khairi Md Daud

Mohd Razif Mohamad Yunus

Narizan Ariffin

Neil Solomons

Ngou Chee-Foo

Nor Azmi Mohamad

Norzi Ghazali

Norzila Mohamed Zainudin

Nurliza Idris

Ong Cheng-Ai

Prepageran Narayanan

Primuharsa Putra bin Sabir

Husin Athar

Raja Ahmad Al Konee

Raja Lope Ahmad

Rus Anida Awang

Ruszymah Idrus

Salina Husain

Saraiza Abu Bakar

Shailendra Sivalingam

Siti Sabzah Mohd Hashim

Surendran Thavagnanam

Sushil Brito-Mutunayagam

Suzina Sheikh Ab Hamid

Tengku Mohamed Izam

Tengku Kamalden

Thambu Maniam

Vicknes Waran

Wan Islah Wan Leman

Zarina Abdul Latiff

Asian Paediatric Otolaryngology Group

CHINA

Yamei Zhang
Children's Hospital Beijing, China

Indonesia

Retno S Wardani
University of Indonesia, Indonesia

Malaysia

Siti Sabzah Mohd Hashim
Alor Star Hospital, Kedah, Malaysia

Philippines

C Gretchen Navarro-Locsin
St Luke's Hospital Manila, Philippines

Singapore

Abhilash Balakrishnan
K K Women's & Children's Hospital, Singapore
Henry K K Tan
K K Women's & Children's Hospital, Singapore

Taiwan

Hsu Wei-Chung
National Taiwan University Hospital, Taiwan

Vietnam

Nguyen Thi Ngoc Dung
ENT Hospital, Ho Chi Minh City, Vietnam

MSO-HNS Executive Committee 2012-2013



President
Prof Dr Primuharsa
Putra bin Sabir
Husin Athar



President Elect
Prof Dr
Prepageran
Narayanan



**Immediate Past
President**
Dr Yap Yoke Yeow



Honorary Secretary
Dr Revadi Govindaraju



Treasurer
Dr Avatar Singh



Committee Member
Datin Dr Siti Sabzah
Mohd Hashim



Committee Member
Assoc Prof
Dr Goh Bee-See



Committee Member
Assoc Prof
Dr Mazita Ami



Committee Member
Assoc Prof Dr Mohd
Razif Mohamad Yunus



Committee Member
Dr Jeevanan
Jahendran



Committee Member
Dr Anura
Michelle Manuel



Committee Member
Dr Rekha
Balachandran



Committee Member
Dr Pathma
Letchumanan

Non-Executive Committee



Auditor
Prof Dr Abdullah
Sani Mohamed



Auditor
Datuk Dr Kuljit Singh

Programme Summary

DATE TIME	15 TH MAY 2013 WEDNESDAY	16 TH MAY 2013 THURSDAY	17 TH MAY 2013 FRIDAY	18 TH MAY 2013 SATURDAY
0730 - 1700	REGISTRATION			
0800 - 0900	Pre-Congress Concurrent Workshops (1) 2 nd UKM Paediatric Airway (2) 1 st UMMC Bone-Bridge Implant Workshop (3) Tracheostomy (4) The Use Of Harmonic Scalpel In Otorhino-laryngology Surgery GOLF (1000 - 1600)	Plenary 1	Plenary 3	Plenary 4
0900 - 1000		OPENING CEREMONY & KEYNOTE ADDRESS	Symposia 7 - 9	Symposia 16 - 18
1000 - 1100		Trade Exhibition & Tea	Tea	
1100 - 1200		Symposia 1 - 3	Symposia 10 - 12	Symposia 19 - 21
1200 - 1300		Free Papers 1 - 3	Lunch Satellite Symposium	Symposium 22 Instructional Course 3
1300 - 1400		Lunch Satellite Symposium	Friday Prayers / ASIAN PAEDS ORL Group Business Meeting	Lunch
1400 - 1500		PLENARY 2	Instructional Courses 1 & 2	Post-Congress Workshop • Bone Anchored Hearing Aid (BAHA)
1500 - 1600		Symposia 4 - 6	Symposia 13 - 15	
1600 - 1700		Questions To Be Addressed	Free Papers 4 - 6	
1700 - 1800		Tea / AGM (MSO-HNS Members Only)	Tea	
1800 - 1900				
1900 - 2230		GALA DINNER		

Pre-Congress Workshop (1) 15th May 2013, Wednesday

Universiti Kebangsaan Malaysia Medical Centre, Kuala Lumpur



Malaysian Society of
Otorhinolaryngologists –
Head and Neck Surgeon
(MSO-HNS)

2ND UKM PAEDIATRIC AIRWAY

in conjunction with

Pre-Congress 4th Asian Paediatric Otorhinolaryngology Congress

Course Director : Goh Bee-See

Course Coordinator : Kong Min-Han

Venues : Stargate Room, Department of Surgery, Level 8,
Universiti Kebangsaan Malaysia Medical Centre, Kuala Lumpur, Malaysia
Microsurgical Lab, Department of ORL-HNS, Level 9,
Universiti Kebangsaan Malaysia Medical Centre, Kuala Lumpur, Malaysia

2ND UKM PAEDIATRIC AIRWAY WORKSHOP

in conjunction with Pre-congress 4th Paediatric Otorhinolaryngology Congress

Venue : Stargate Room, Department of Surgery, Level 8, UKMMC

0745 - 0800	Registration
0800 - 0815	Welcome Address
0815 - 0845	Endoscopic laryngotracheal cleft repair without tracheotomy or intubation [pg 24] Kishore Sandu
0845 - 0915	Evaluation of respiratory distressed infant Kishore Sandu
0915 - 0945	Endoscopic vs open airway surgery - Indications and outcomes Michael J Rutter
0945 - 1005	Supraglottoplasty in laryngomalacia: Who will benefit? Goh Bee-See
1005 - 1030	Photo sessions and Tea
1030 - 1100	Paediatric airway stenosis: LTR or CTR? Michael J Rutter
1100 - 1120	Stents in paediatric airway diseases Siti Sabzah Mohd Hashim
1120 - 1150	Slide tracheoplasty Michael J Rutter
1150 - 1220	Endoscopic laser surgery in paediatric airway management [pg 24] Hsu Wei-Chung
1220 - 1240	Laryngotracheal stenosis - Tips and tricks over the years Alan T L Cheng
1240 - 1330	Lunch

HANDS-ON CADAVERIC DISSECTION

Venue : Microsurgical Laboratory, Department of ORL-HNS, Level 9, UKMMC

Moderators : Michael J Rutter / Kishore Sandu / Hsu Wei-Chung / Alan T L Cheng / Siti Sabzah Mohd Hashim / Goh Bee-See

1330 - 1700	Cadaveric dissection course Supraglottoplasty Laryngotracheal reconstruction (LTR) Cricotracheal resection (CTR) [pg 25] Slide tracheoplasty
1700 - 1730	Tea

Please be reminded that the workshop is not in the same venue (Microsurgical Laboratory, Department of ORL-HNS, Level 9, UKMMC). As for the lectures (Stargate Room, Department of Surgery, Level 8, UKMMC). Transport will be provided from Shangri-La Hotel only, at 0715 hrs.

Pre-Congress Workshop (2) 15th May 2013, Wednesday

University Malaya Medical Centre, Kuala Lumpur

1ST UMMC BONE-BRIDGE IMPLANT WORKSHOP

Course Director/Coordinator : Mohd Zulkiflee Bin Abu Bakar

Venue : Clinical Auditorium, University Malaya Medical Centre, Kuala Lumpur

0800 - 0830	Registration
0830 - 0900	Lecture: The concept of bone-bridge implantation Prepageran Narayanan
0900 - 1030	Live surgery: Bone-bridge implant
1030 - 1100	Tea
1100 - 1230	Hands-on: Artificial bone drilling for bone-bridge implant
1230 - 1330	Lunch
1330 - 1700	Hands-on: Artificial bone drilling for bone-bridge implant (cont'd)
1700	End of workshop

Pre-Congress Workshop (3) 15th May 2013, Wednesday

Shangri-La Hotel, Kuala Lumpur

TRACHEOSTOMY

▶ Perak

Course Director : Avatar Singh

Course Coordinator : Lina Ling Chooi

0800 - 0830	Registration
0830 - 0850	Indications of tracheostomy [pg 25] Ngou Chee-Foo
0850 - 0910	Tracheostomy procedures and types of tracheostomy tubes Avatar Singh
0910 - 0930	Tracheostomy complications Sushil Brito-Mutunayagam
0930 - 0950	Speech with a tracheostomy Sushil Brito-Mutunayagam
0950 - 1030	Tea
1030 - 1100	Paediatric tracheostomy Suzina Sheikh Ab Hamid
1100 - 1130	Methods of decannulation Suzina Sheikh Ab Hamid
1130 - 1200	Care of child with tracheostomy and invasive ventilation [pg 26] Rachel Seet Soh Cheng
1200 - 1230	Discharge planning [pg 26] Rachel Seet Soh Cheng
1230 - 1400	Lunch
1400 - 1600	Workstation: Including hands-on and demonstration using manikin Types of tracheostomy tubes and accessories Avatar Singh / Sushil Brito-Mutunayagam Care of the tracheostomy tube and O2 delivery devices-(Workshop) [pg 27] Rachel Seet Soh Cheng Changing of the tracheostomy tube and oxygen delivery devices Suzina Sheikh Ab Hamid / Ngou Chee-Foo

Pre-Congress Workshop (4) 15th May 2013, Wednesday

Universiti Kebangsaan Malaysia Medical Centre, Kuala Lumpur

THE USE OF HARMONIC SCALPEL IN OTORHINOLARYNGOLOGY SURGERY

Venue : Department of Otorhinolaryngology – Head & Neck Surgery and Operation Theatre
9th Floor, Universiti Kebangsaan Malaysia Medical Centre, Kuala Lumpur

Course Director : Mohd Razif Mohamad Yunus

0745 - 0800	Registration
0800 - 0815	Welcome address Mohd Razif Mohamad Yunus
0815 - 0915	Harmonic scalpel technology B Satyanand Shastri
0915 - 1000	UKMMC's experiences of harmonic scalpel in otorhinolaryngology surgery Mohd Razif Mohamad Yunus
1000 - 1015	Tea
1015 - 1600	Live surgery - Tonsillectomy - Excision biopsy

Daily programme

16th May 2013, Thursday

0730 - 0800 **REGISTRATION**

0800 - 0845 **PLENARY 1** ▶ Sabah
 Moderators: **Goh Bee-See / Anura Michelle Manuel**
 Paediatric Endoscopic Airway Surgery: State-Of-The-Art
Michael J Rutter

0845 - 1000 **OPENING CEREMONY** ▶ Sabah
 Keynote Address by **Siti Sabzah Mohd Hashim**

0830 Arrival of VVIP

0845 Arrival of Director-General of Health Malaysia

Singing of National Anthem

Recital of Prayer

Speeches by:

- **Goh Bee-See**

Organising Chairperson, 4th Asian Paediatric ORL Congress & 5th Malaysian International ORL-HNS Congress

- **Primuharsa Putra bin Sabir Husin Athar**

President, Malaysian Society of Otorhinolaryngologists - Head & Neck Surgeons

- **Siti Sabzah Mohd Hashim**

President, Asian Paediatric Otolaryngology Group & Congress Advisor, Asian Paediatric Otolaryngology

Performance by "Kakinari Dancers" from Sekolah Kebangsaan Seri Bintang Utara, Cheras, Kuala Lumpur.

Speech by Director-General of Health Malaysia

Officiate the Opening of Congress

Launching of Clinical Practice Guidelines

"Management of Otitis Media with Effusion in Children"

Keynote Address

Visit to Exhibition Booth with Director-General of Health Malaysia

1000 - 1030 Trade Exhibition & Tea

1030 - 1130

▶ Selangor	▶ Perak	▶ Sabah
RHINOLOGY/PAEDIATRICS MISC	OTOLOGY/SKULL BASE	PAEDIATRIC AIRWAY/ LARYNGOLOGY/HEAD & NECK
<p>SYMPOSIUM 1 Nasal Pathology In Infants</p> <p>Moderators: Revadi Govindaraju / Aneeza Khairiyah W Hamizan</p> <p>Congenital nasal mass and blocked nose Norzi Ghazali</p> <p>Compare the endoscopic marsupialization and lacrimal duct probing curative effect in treatment of congenital dacryocystocele [pg 27] Yamei Zhang</p> <p>Bony abnormalities of nasal cavity in newborn Nurliza Idris</p> <p>CSF rhinorrhoea in children [pg 28] Abhilash Balakrishnan</p>	<p>SYMPOSIUM 2 Vertigo</p> <p>Moderators: Mazita Ami / Philip Rajan</p> <p>Dizziness in children [pg 28] C Gretchen Navarro-Loecin</p> <p>How effective is vertigo rehabilitation exercise? Nor Azmi Mohamad</p> <p>Role of surgery in vertigo Lokman Saim</p> <p>Vertigo: Psychiatrist's point of view Thambu Maniam</p>	<p>SYMPOSIUM 3 Laryngopharyngeal Reflux Disease</p> <p>Moderators: Henry K K Tan / Saraiza Abu Bakar</p> <p>GERD in children: Is it a myth [pg 28] Rus Anida Awang</p> <p>Endoscopic encounters in reflux Siti Sabzah Mohd Hashim</p> <p>Role of surgery in Paediatric Gastro-oesophageal Reflux Disease (GORD) [pg 29] Dayang Anita Abdul Aziz</p> <p>Laryngopharyngeal reflux in voice disorders [pg 29] Abdullah Sani Mohamed</p>

1130 - 1230

<p>FREE PAPERS 1 [pg 48-52] ▶ Selangor</p> <p>Moderators: Nik Fariza Husna / Chong Hon Syn</p>	<p>FREE PAPERS 2 [pg 53-56] ▶ Perak</p> <p>Moderators: Hazama Mohamad / Roslenda Abd Rahman</p>	<p>FREE PAPERS 3 [pg 57-60] ▶ Sabah</p> <p>Moderators: Saraiza Abu Bakar / Irfan Mohamad</p>
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Daily programme

16th May 2013, Thursday

1230 - 1400 Lunch Satellite Symposium - Merck Sharp & Dohme ▶ Sabah
 Opening by Chairman and Moderator **Prepageran Narayanan**
 Common and Complicated Allergic Rhinitis in Adults **Wang De-Yun**
 Common and Complicated Allergic Rhinitis in Paediatrics **Henry K K Tan**
 Current Common Practices **Prepageran Narayanan**

1400 - 1445 **PLENARY 2** ▶ Sabah
 Moderators: **Lim Wye-Keat / Lina Ling Chooi**
 Paediatric Swallowing And Aspiration Disorders
Kishore Sandu

1445 - 1615

▶ Selangor RHINOLOGY/PAEDIATRICS MISC	▶ Perak OTOLOGY/SKULL BASE	▶ Sabah PAEDIATRIC AIRWAY/ LARYNGOLOGY/HEAD & NECK
<p>SYMPOSIUM 4 Endoscopic Sinus Surgery – The Current Era Moderators: Pathma Letchumanan / Somasunderam Muthusamy</p> <p>Endoscopic sinus surgery training for residents Salina Husain</p> <p>Pitfalls in endoscopic sinus surgery and how to avoid them Balwinder Singh</p> <p>Clinical and surgical updates in nasal polyposis Dipak Banarsi Dass</p> <p>Endoscopic orbital and optic nerve decompression [pg 30] Prepageran Narayanan</p> <p>Surgery in allergic rhinitis – Is there a role? Jeevanan Jahendran</p>	<p>SYMPOSIUM 5 Lateral Skull Base Surgery Moderators: Shailendra Sivalingam / Nor Azmi Mohamad</p> <p>Translabyrinthine surgery for intracranial tumor – An otological domain Tengku Mohamed Izam Tengku Kamalden</p> <p>Neuroradiology for the skull base surgeon Kew Thean-Yean</p> <p>Non-surgical management of vestibular schwannomas [pg 30] Hari Chandran</p> <p>Management of intradural extension in skull base tumours Shailendra Sivalingam</p> <p>Minimizing and managing complications in skull base surgery Prepageran Narayanan</p>	<p>SYMPOSIUM 6 Paediatric Airway Moderators: Hsu Wei-Chung / Norzie Ghazali</p> <p>How I evaluate the obstructed airway in children [pg 31] Henry K K Tan</p> <p>The acute airway/intubation nightmares Michael J Rutter</p> <p>Current concepts in management of vocal cord palsy [pg 31] Alan T L Cheng</p> <p>Management of airway hemangiomas [pg 31] Henry K K Tan</p> <p>Challenges in managing recurrent respiratory papillomatosis in children [pg 32] Goh Bee-See</p>

1615 - 1700

▶ Selangor RHINOLOGY/PAEDIATRICS MISC	▶ Perak OTOLOGY/SKULL BASE	▶ Sabah PAEDIATRIC AIRWAY/ LARYNGOLOGY/HEAD & NECK
<p>Endoscopic Skull Base Experiences Endoscopic Skull Base Surgery Moderator: Balwinder Singh</p> <p>Evolution & revolution in endoscopic pituitary surgery – HKL experience [pg 32] Narizan Ariffin</p> <p>Endoscopic transnasal approach to the anterior, central, posterior cranial fossa and upper cervical spine Prepageran Narayanan</p> <p>Local innovations and applications in skull base surgery Vicknes Waran</p>	<p>Questions To Be Addressed Dilemmas In Otitis Media & Middle Ear Effusion Moderators: Asma Abdullah / Philip Rajan</p> <p>Panelists: Abhilash Balakrishnan C Gretchen Navarro-Locsin Aminuddin Saim</p> <p>Burden of otitis media Timing and types of myringotomy tubes insertion Recurrent otitis media – Non optimal therapy / immunodeficiency</p>	<p>Round Table Discussion Paediatric Tracheostomy Versus Prolonged Intubation Moderator: Kishore Sandu</p> <p>Panelists: Michael J Rutter Koji Kojima Siti Sabzah Mohd Hashim Alan T L Cheng Norzila Mohamed Zainudin</p>

1700 - 1730 Tea

1700 - 1900 Annual General Meeting (MSO-HNS Members only) ▶ Selangor

Daily programme

17th May 2013, Friday

0800 - 0900

PLENARY 3

Moderator: **Salina Husain**

Olfactory Disorders – Medicolegal Aspects
Basil Landis

▶ Sabah

0900 - 1000

▶ Selangor	▶ Perak	▶ Sabah
RHINOLOGY/PAEDIATRICS MISC	OTOLOGY/SKULL BASE	PAEDIATRIC AIRWAY/ LARYNGOLOGY/HEAD & NECK
<p>SYMPOSIUM 7 Rhinosinusitis</p> <p>Moderators: Abhilash Balakrishnan / Yamei Zhang</p> <p>Paediatric issues in allergic rhinitis [pg 33] C Gretchen Navarro-Loesin</p> <p>Adenoditis, sinusitis and its relationship to ET dysfunction Nguyen Thi Ngoc Dung</p> <p>Diagnostic criteria of pediatric rhinosinusitis [pg 33] Retno S Wardani</p> <p>The use of intranasal steroids in children [pg 33] Anura Michelle Manuel</p>	<p>SYMPOSIUM 8 Sensorineural Hearing Loss</p> <p>Moderators: Tengku Mohamed Izam Tengku Kamalden / Mazita Ami</p> <p>Management of sudden SNHL Wan Islah Wan Leman</p> <p>Use of intratympanic steroids Charlotte Chiong</p> <p>Auditory neuropathy Ong Cheng-Ai</p> <p>When do aided auditory thresholds reach the speech spectrum after cochlear implant switch on? [pg 34] Maria Rina T Reyes-Quintos</p>	<p>SYMPOSIUM 9 Research Update</p> <p>Moderators: Lee Kuo-Sheng / Aminuddin Saim</p> <p>Tissue engineering: In otorhinolaryngology at UKM Medical Centre [pg 34] Ruszymah Idrus</p> <p>Autologous tissue engineered trachea with epithelial cell sheets in ovine model [pg 35] Koji Kojima</p> <p>Biophysical properties of preserved amniotic membrane as an epidermal substitute in ORL-HNS [pg 35] Suzina Sheikh Ab Hamid</p>

1000 - 1030

TEA

1030 - 1230

▶ Selangor	▶ Perak	▶ Sabah
RHINOLOGY/PAEDIATRICS MISC	OTOLOGY/SKULL BASE	PAEDIATRIC AIRWAY/ LARYNGOLOGY/HEAD & NECK
<p>SYMPOSIUM 10 Nasal Tumours</p> <p>Moderators: Rekha Balachandran / Indrani Batumalay</p> <p>Endoscopic surgery for nasopharyngeal angiofibroma with the help of monopolar coagulation [pg 36] Nguyen Thi Thanh Thuy</p> <p>Endoscopic resection of malignant sinonasal tumours [pg 36] Narizan Ariffin</p> <p>Advanced sinonasal tumours – Should we preserve the eye? Baharuddin Abdullah</p> <p>Management of paediatric rhabdomyosarcoma [pg 36] Zarina Abdul Latiff</p>	<p>SYMPOSIUM 11 Cholesteatoma, Tympanoplasty</p> <p>Moderators: Charlotte Chiong / Wan Islah Wan Leman</p> <p>Cavity management options in mastoidectomy Tengku Mohamed Izam Tengku Kamalden</p> <p>Overcoming the difficult case in cholesteatoma surgery [pg 37] Lokman Saim</p> <p>Revision mastoidectomies: Ensuring a good outcome [pg 37] Asma Abdullah</p> <p>Bone-bridge implant Prepageran Narayanan</p>	<p>SYMPOSIUM 12 Paediatric OSA</p> <p>Moderators: Retno Wardani / Nurliza Idris</p> <p>Value of sleep study in children Norzila Mohamed Zainudin</p> <p>Impacts of adenotonsillectomy on respiratory events in pediatric OSA [pg 37] Hsu Wei-Chung</p> <p>OSA beyond T&A Michael J Rutter</p> <p>Sleep endoscopy for persistent OSA [pg 38] Alan T L Cheng</p>

Daily programme

17th May 2013, Friday

1200 - 1245 Lunch Satellite Symposium (GlaxoSmithKline) ▶ Sarawak
 Moderator: **Siti Sabzah Mohd Hashim**
 Updates in Paediatric Acute Otitis Media ▶ Sabah
C Gretchen Navarro-Loocsin

1245 - 1415 Friday Prayers / ASIAN PAEDS ORL Group Business Meeting

<p>1415 - 1515 INSTRUCTIONAL COURSE 1 ▶ Selangor</p> <p>Olfactory Disorders Basil Landis</p> <ul style="list-style-type: none"> - Olfaction and neurodegenerative disorders - Clinical work-up - Retronasal olfaction – Practical advise 	<p>INSTRUCTIONAL COURSE 2 ▶ Sabah</p> <p>Treatment Of Laryngotracheal Stenosis – How I Do It Michael J Rutter</p> <ul style="list-style-type: none"> - Evaluation of laryngotracheal stenosis - Endoscopic versus open surgery - Role of airway balloon dilatation
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1515 - 1615

▶ Selangor RHINOLOGY/PAEDIATRICS MISC	▶ Perak OTOLOGY/SKULL BASE	▶ Sabah PAEDIATRIC AIRWAY/ LARYNGOLOGY/HEAD & NECK
<p>SYMPOSIUM 13 Facial Plastics</p> <p>Moderators: Ahmad Nordin / Carren Teh Sui Lin</p> <p>Facial plastics – A plastic surgeon's perspective Alizan Abd Kahlii</p> <p>Facial plastics – The role of the ENT surgeon Neil Solomons</p>	<p>SYMPOSIUM 14 Newborn Hearing Screen/ Research</p> <p>Moderators: Ong Cheng-Ai / Raja Ahmad Al Konee Raja Lope Ahmad</p> <p>Recommended hearing screening tools in the newborn [pg 38] Mohd Khairi Md Daud</p> <p>Syndromic congenital hearing loss [pg 39] Asma Abdullah</p> <p>Development of a novel bio-absorbable grommet tube [pg 39] Lynne Lim H Y</p> <p>Development of a novel clinic-based applicator for grommet tubes [pg 40] Lynne Lim H Y</p>	<p>SYMPOSIUM 15 Head & Neck Lesions In Children</p> <p>Moderators: Lin Che-Yi / Anura Michelle Manuel</p> <p>Thyroglossal duct cyst Saraiza Abu Bakar</p> <p>Lymphangioma Hamzaini Abdul Hamid</p> <p>Paediatric head & neck masses [pg 40] Primuharsa Putra bin Sabir Husin Athar</p> <p>Neck masses in newborns & role of EXIT Siti Sabzah Mohd Hashim</p>

1615 - 1715

<p>FREE PAPERS 4 [pg 61-64] ▶ Selangor</p> <p>Moderators: Iqbal Farim Rizal Wong / Kong Min Han</p>	<p>FREE PAPERS 5 [pg 65-68] ▶ Perak</p> <p>Moderators: Ee Yuin Su / Khairullah Anuar</p>	<p>FREE PAPERS 6 [pg 69-72] ▶ Sabah</p> <p>Moderators: Carren Teh Sui Lin / Indrani Batumalay</p>
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1715 - 1745 Tea

1900 - 2230 GALA DINNER ▶ Sarawak

Daily programme

18th May 2013, Saturday

0800 - 0900

PLENARY 4

Moderator: **Mazita Ami**

▶ Sabah

Direct Bone Conduction Technology
Gordon Soo

0900 - 1000

▶ Selangor	▶ Perak	▶ Sabah
RHINOLOGY/PAEDIATRICS MISC	OTOLOGY/SKULL BASE	PAEDIATRIC AIRWAY/ LARYNGOLOGY/HEAD & NECK
<p>SYMPOSIUM 16 Paediatric Medical Issues Of Importance</p> <p>Moderators: Kang Kun-Tai / Ngou Chee-Foo</p> <p>Usefulness of allergy testing – Blood and skin prick tests [pg 41] Amir Hamzah Abdul Latiff</p> <p>Chronic cough Surendran Thavagnanam</p> <p>Manifestation and management of MPS in ENT [pg 41] Lee Kuo-Sheng</p>	<p>SYMPOSIUM 17 Middle Ear Diseases</p> <p>Moderators: Suzina Sheikh Ab Hamid / Shailendra Sivalingam</p> <p>Genetic basis of otitis media Maria Rina T Reyes-Quintos</p> <p>Role and timing of ventilation tubes for MEE in NPC Baharuddin Abdullah</p> <p>Management of facial nerve palsy in middle ear disease Raja Ahmad Al Konee Raja Lope Ahmad</p> <p>Middle ear tumours [pg 42] Iskandar Hailani</p>	<p>SYMPOSIUM 18 Autofluorescence</p> <p>Moderators: Mohd Razif Mohamad Yunus / Kong Min-Han</p> <p>Clinical application of optical techniques in head & neck malignancies Christian Betz</p> <p>Local experience in autofluorescence technology Avatar Singh</p> <p>Research in autofluorescence Baharuddin Abdullah</p>

1000 - 1030

Tea

1030 - 1130

▶ Selangor	▶ Perak	▶ Sabah
RHINOLOGY/PAEDIATRICS MISC	OTOLOGY/SKULL BASE	PAEDIATRIC AIRWAY/ LARYNGOLOGY/HEAD & NECK
<p>SYMPOSIUM 19 Epistaxis</p> <p>Moderators: Tan Keng-Lu / Dipak Banarsi Dass</p> <p>Management of intraoperative bleeding during sinonasal surgery [pg 42] Prepageran Narayanan</p> <p>Sphenopalatine artery ligation Harvinder Singh</p> <p>Epistaxis and the role of the interventional radiologist [pg 43] Khairul Azmi Abdul Kadir</p>	<p>SYMPOSIUM 20 Congenital Ear Anomalies</p> <p>Moderators: Iskandar Hailani / Tsai Hsun-Tien</p> <p>Canal stenosis: Management Charlotte Chiong</p> <p>Canalplasty: Surgical tips [pg 43] Lokman Saim</p> <p>Total ear reconstruction using autogenous tissue: The UKMMC experience Farrah Hani Imran</p> <p>Parental counselling in congenital ear anomalies [pg 44] Suzina Sheikh Ab Hamid</p>	<p>SYMPOSIUM 21 Infratemporal Fossa Tumours</p> <p>Moderators: Avatar Singh / Shahrul Hitam</p> <p>Functional reconstruction of the upper aerodigestive tract using free tissue transplants: The Munich experience Christian Betz</p> <p>Lower cheek flap approach for infratemporal fossa tumours [pg 44] Mohd Razif Mohamad Yunus</p> <p>Endoscopic surgery of the pterygopalatine and infratemporal fossa [pg 44] Prepageran Narayanan</p>

Daily programme

18th May 2013, Saturday

1130 - 1230

SYMPOSIUM 22

Cochlear Implant

Moderators: **Eris Llanes / Goh Bee-See**

The value of molecular approach in new born hearing screen programme [\[pg 45\]](#)

Tsai Hsun-Tien

Value of NRT in cochlear implantation surgery

Meliza Cruz

Review of cochlear implantation in Taiwan and personal experience in Chang-Gung Memorial Hospital [\[pg 46\]](#)

Wu Che-Ming

Surgical challenges in cochlear implantation [\[pg 47\]](#)

Lokman Saim

▶ Perak

INSTRUCTIONAL COURSE 3

▶ Selangor

Autofluorescence

Live demonstration on autofluorescence in head and neck malignancy

Christian Betz

1230 - 1330

Lunch

▶ Sarawak

1330 - 1745

POST-CONGRESS WORKSHOP

Bone Anchored Hearing Aid (BAHA)

▶ Perak

Post-Congress Workshop 18th May 2013, Saturday

Shangri-La Hotel, Kuala Lumpur

Bone Anchored Hearing Aid (BAHA)

► Perak

Course Director : Goh Bee-See
Course Coordinator : Wan Fazlina Wan Hashim
Speakers and Facilitators : Asma Abdullah (Malaysia)
Goh Bee-See (Malaysia)
Gordon Soo (Hong Kong)
Henry K K Tan (Singapore)
Eris Llanes (Philippines)
Meliza Cruz (Singapore)
Nurliza Idris (Malaysia)
Wan Fazlina Wan Hashim (Malaysia)
Yuzaida Yussof (Malaysia)

1330 - 1400 **Registration**
1400 - 1405 **Welcome speech**
[Goh Bee-See](#)
1405 - 1430 Direct bone conduction technology in hearing - Do we understand it enough?
[Gordon Soo](#)
1430 - 1450 Audiological indications for BAHA
[Eris Llanes](#)
1450 - 1510 Clinical indication for BAHA
[Goh Bee-See](#)
1510 - 1530 BAHA surgery for children
[Henry K K Tan](#)
1530 - 1550 How to select your BAHA patient?
[Gordon Soo](#)
1550 - 1610 Managing surgical and clinical BAHA complications
[Gordon Soo](#)
1610 - 1630 Tea
1630 - 1745 **Hands-on Workshop**
Group 1 - Doctors
Group 2 - Audiologists

► Perak
► Selangor

Congress Information

Registration

The registration hours are:

15 th May 2013 (Wednesday)	1500 to 1700 hrs
16 th May 2013 (Thursday)	0700 to 1700 hrs
17 th May 2013 (Friday)	0700 to 1700 hrs
18 th May 2013 (Saturday)	0730 to 1100 hrs

Entitlements

Registered delegates will be entitled to the following:

- Admission to the scientific sessions, satellite symposia and trade exhibition
- Conference bag and materials
- Gala Dinner
- Lunches & Coffee/Tea

Gala Dinner (17th May 2013)

The Gala Dinner will be held in the Sarawak Room. Registered delegates are requested to confirm your attendance at the registration counter.

Dress: Smart Casual

Entrance strictly by invitation card only.

Identity Badges

Delegates are kindly requested to wear identity badges during all sessions and functions.

Admission will be restricted to persons with proper identification.

Speakers and Presenters

All speakers and presenters are requested to upload their presentation files at the Speaker Ready Room at the Sabah Ante-Room at least two hours prior to their presentations or the day before. There will be helpers on duty to assist with your requirements regarding your presentation. The operating hours are:

15 th May 2013 (Wednesday)	1500 to 1700 hrs
16 th May 2013 (Thursday)	0700 to 1700 hrs
17 th May 2013 (Friday)	0700 to 1700 hrs
18 th May 2013 (Saturday)	0730 to 1200 hrs

All presentations will be deleted from the conference computers after the presentations are over.

Posters

Posters will be displayed in Basement II. The Organising Committee bears no responsibility for the safekeeping of posters. The congress will not be responsible for any posters which are not collected by the close of each respective poster session when new posters need to be set up.

Photography & Videotaping Policies

No photography or videotaping of the presentations is permitted during the scientific sessions.

Mobile phones

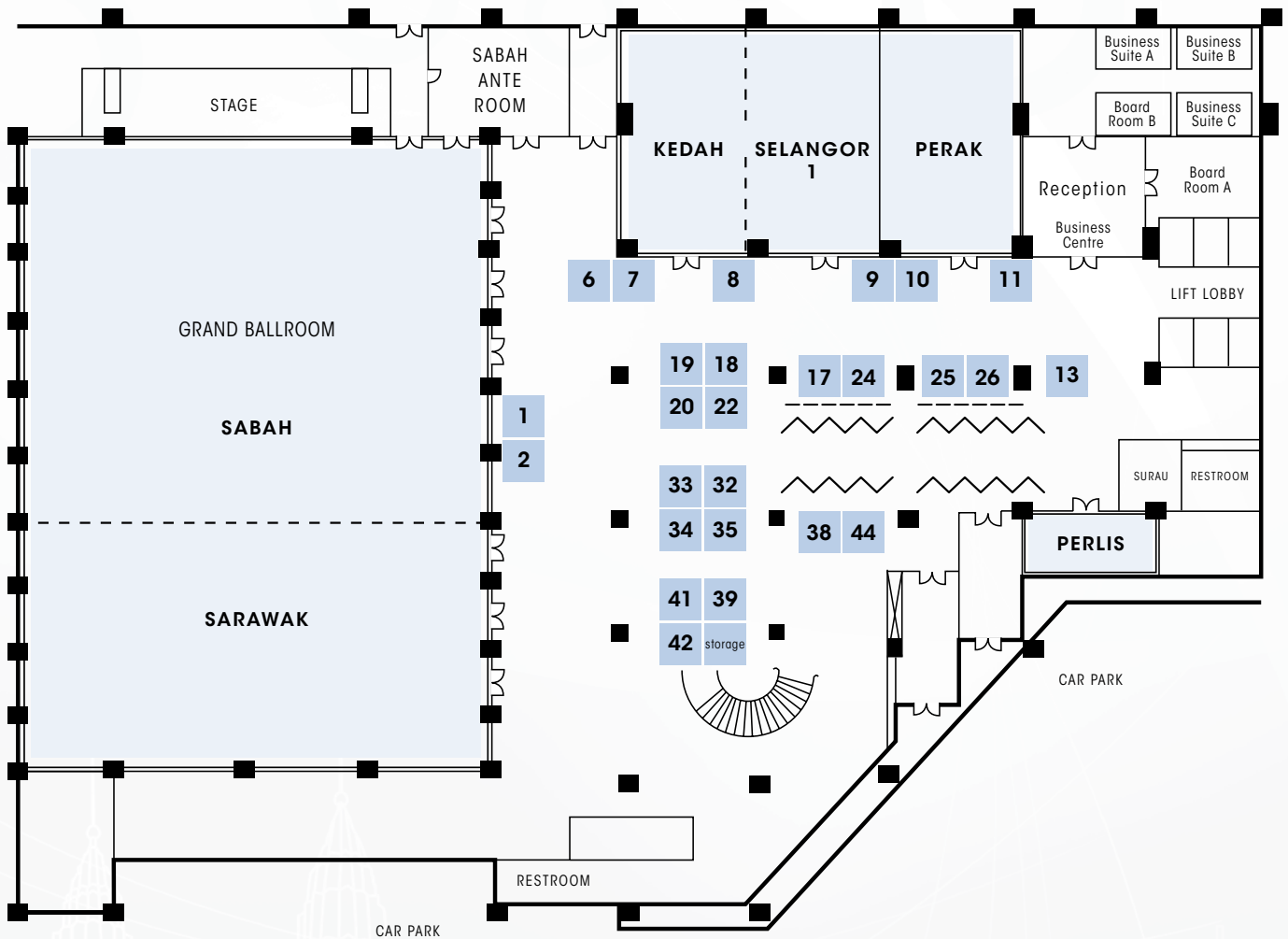
For the convenience of all delegates, please ensure that your mobile phone is silenced during the conference sessions.

Liability

The Organising Committee will not be liable for personal accidents, loss or damage to private properties of the delegates during the Convention. Participants should make their arrangements with respect to personal insurance.

Disclaimer: Whilst every attempt will be made to ensure that all aspects of the Conference as mentioned in this publication will take place as scheduled, the Organising Committee reserves the right to make changes should the need arise.

Floor Plan & Trade Exhibition



Booth Nos.	Company	Booth Nos.	Company
1 & 2	Merck Sharp & Dohme	22	Takeda Malaysia Sdn Bhd
6	Endodynamics (M) Sdn Bhd	24	Abbott Laboratories (M) Sdn Bhd
7	Incus Surgical Malaysia Sdn Bhd	25	Kotra Pharma (M) Sdn Bhd
8	Somnotec (M) Sdn Bhd	26	Jet Pharma Sdn Bhd
9	Tianjin Bolang Science-Technology Development Co Ltd	32	iNova Pharmaceuticals
10	ATMOS MedizinTechnik Asia Sdn Bhd	33 & 34	GlaxoSmithKline Pharmaceutical Sdn Bhd
11	Johnson & Johnson Medical Malaysia	35	Primed Medical Sdn Bhd / Pall Thai Medical Sdn Bhd
13	Quantivest Sdn Bhd	38	Humedical (M) Sdn Bhd
17	MED EL Electronics Sdn Bhd	39	Pharmaniaga Marketing Sdn Bhd
18	Labchem Sdn Bhd	41	Delta Medisains (M) Sdn Bhd
19	Sanofi-Aventis (Malaysia) Sdn Bhd	42	Servicom Medical Sdn Bhd
20	Acclarent	44	Medtronic

ENDOSCOPIC LARYNGOTRACHEAL CLEFT REPAIR WITHOUT TRACHEOTOMY OR INTUBATION

Kishore Sandu, Philippe Monnier

Service d'ORL et Chirurgie Cervicofaciale, Center Hospitalier Universitaire Vaudois, Lausanne, Switzerland

OBJECTIVES : The objectives of this study are to present the technique and results of endoscopic repair of laryngotracheoesophageal clefts (LTEC) extending caudally to the cricoid plate into the cervical trachea and to revisit the classification of LTEC.

METHODS : The authors conducted a retrospective case analysis consisting of four infants with complete laryngeal clefts (extending through the cricoid plate in three cases and down into the cervical trachea in one case) treated endoscopically by CO₂ laser incision of the mucosa and two-layer endoscopic closure of the cleft without postoperative intubation or tracheotomy.

RESULTS : All four infants resumed spontaneous respiration without support after a mean postoperative period of 3 days with continuous positive airway pressure (CPAP). They accepted oral feeding within 5 postoperative days (range, 3–11 days). No breakdown of endoscopic repair was encountered. After a mean follow up of 48 months (range, 3 mos to 7 y), all children have a good voice, have no sign of residual aspiration, but experience a slight exertional dyspnea.

CONCLUSION : This limited experience on the endoscopic repair of extrathoracic LTEC shows that a minimally invasive approach sparing the need for postoperative intubation or tracheotomy is feasible and safe if modern technology (ultrapulse CO₂ laser, endoscopic suturing, and postoperative use of CPAP in the intensive care unit) is available. Key Words: Cleft larynx and trachea, CO₂ laser, endoscopic repair, endoscopic suturing.

...(abstract truncated at 300 words)

ENDOSCOPIC LASER SURGERY IN PEDIATRIC AIRWAY MANAGEMENT

Wei-Chung Hsu

Division of Pediatric Otolaryngology, Department of Otolaryngology, National Taiwan University Hospital, Taipei, Taiwan

Pediatric airway problem is usually a life-threatening event for children and always a challenge for pediatric otolaryngologist. Since the modern advancement in medical and optical instrumentation with high resolution video system, endoscopy has become an absolutely necessary technique and requirement for the sub-specialty of pediatric otorhinolaryngology.

Endoscopic techniques for evaluation and management of airway in pediatric patients have matured greatly in the past decade, especially with the introduction of Laser instrumentation. For example, to treat severe laryngomalacia, subglottic hemangioma, laryngeal papillomatosis, granuloma or web, subglottic or tracheal stenosis, bilateral vocal fold paralysis, tracheobronchial tumor, congenital fistula etc. were all effective in selective cases.

These developments have been proved that pediatric endoscopic laser surgery can be performed in the airway safely and effectively when a team approach is well collaborate. The appropriate choice of laser instruments, anesthesia access, post-operation intensive cares, cooperation and understanding of families were all essential factors for a successful endoscopic laser surgery in pediatric airway management.

With recent advancement in optic instrumentation and endoscopic techniques, therapeutic endoscopic laser surgery has replaced some traditional surgical techniques and become the primary option for pediatric airway management during the modern practices. Successfully coupling lasers to an endoscope represented a logical extension of the clinical application of the modern medical techniques. Using this modality, a pediatric otolaryngologist takes advantages of endoscopic access, precise tissue vaporization, better hemostasis, minimal local inflammation with relatively painless and less subsequent edema of the narrow airway.

**PRE-CONGRESS WORKSHOP 1
2ND UKM PAEDIATRIC AIRWAY**

CRICOTRACHEAL RESECTION

Kishore Sandu, Philippe Monnier

Service d'ORL et Chirurgie Cervicofaciale, Center Hospitalier Universitaire Vaudois, Lausanne, Switzerland

The management of laryngotracheal stenosis remains a challenging problem for otolaryngologists, especially in the pediatric age group. The complexity of the various preoperative situations implies that no single treatment modality can solve the problem. One has to take into consideration the type of the stenosis (congenital or acquired), its location (supraglottic, glottic, subglottic, or combined), its degree of obstruction and length in the craniocaudal axis, and its association with vocal cord ankylosis or neurogenic paralysis. The presence of tracheal damage (stenosis or localized malacia) related to the tracheostoma or the tracheotomy cannula can further complicate surgical management. According to the nature and severity of the conditions, various types of treatments exist. They range from endoscopic laser sessions with or without dilatation or stenting^[1-4] to laryngotracheal reconstruction (LTR) with anterior, posterior, or combined costal cartilage grafts^[5-7] to partial cricotracheal resection (PCTR) for the most severe grades of stenosis, to extended PCTR for combined glotto-subglottic stenosis^[8,9].

The principle of subglottic resection in infants and children is basically identical to that described for adults. A child's airway is smaller, however, and postoperative management is more challenging. Pediatric subglottic stenosis (SGS) is often associated with glottic scarring (eg, posterior glottic stenosis, cicatricial fusion of the vocal cords), and sometimes laryngeal and mediastinal malformations significantly add to the therapeutic challenge. The worst situations seen in this group of pathologies always result from (1) previously failed LTRs that can distort the laryngeal framework, (2) inappropriate overuse of the laser, and (3) misplacement of the tracheostoma that unnecessarily damages the normal trachea.

The best chance for patients lies in a successful first surgery, which implies that surgeons be fully trained in pediatric upper airway endoscopy and laryngotracheal surgery, because inappropriate initial management of SGS may lead to permanent, intractable sequelae.

...(abstract truncated at 300 words)

**PRE-CONGRESS WORKSHOP 3
TRACHEOSTOMY**

INDICATIONS OF TRACHEOSTOMY

Ngou Chee Foo

Department of Otorhinolaryngology, Hospital Raja Permaisuri Bainun, Ipoh, Perak, Malaysia

Tracheostomy is an operative procedure that creates a surgical airway in the cervical trachea. The term tracheostomy is considered to be synonymous with tracheotomy. This technique of slashing the throat to save the life was known erstwhile as semislaughter operation. However, once the technique was perfected as a last resort in largely hopeless cases of diphtheria in the past, the opportunities it offered for medical heroism ensured its place in the surgical armamentarium. Was first described by Asclepiades of Bithynia as early as 100 BC as an incision in the throat for improving the airway. In 1546, Brasavola from Italy published an account of tracheostomy for tonsillar obstruction. He was the first person known to actually perform the operation successfully. In 1921, Chevalier Jackson of Pennsylvania codified indications and techniques for modern tracheostomy and warned of complications of high tracheostomy (cricothyrotomy).

Indications of tracheostomy can be assembled into 3 groups, i.e. airway obstruction, protection of tracheobronchial tree and ventilatory insufficiency. Conditions that cause airway obstruction can be due to congenital causes (e.g. subglottic stenosis, laryngeal web, tracheal stenosis or tracheo-oesophageal anomalies), traumatic causes (e.g. laryngeal injuries, inhalation of poisonous gases or swallowing of corrosive), foreign bodies inhalations, tumours, infections (e.g. acute epiglottitis or croup) and vocal cords paralysis from various diatheses. Tracheostomy is also indicated for protection of the tracheobronchial tree for patients with copious or suppurative bronchial secretions, comatose states with severe head injury or post neurosurgical procedures, multiple facial fractures, severe burns of the face, advanced stage of myasthenia gravis or Guillain-Barre syndrome or after certain head and neck surgeries (e.g. total glossectomy with flap reconstruction). Ventilatory insufficiency causes includes severe pulmonary diseases (e.g. chronic bronchitis with emphysema or severe pneumonia), severe chest injuries, neuromuscular dysfunction, poliomyelitis, tetanus, Guillain-Barre syndrome and prolonged ventilation from various pathologies.

**PRE-CONGRESS WORKSHOP 3
TRACHEOSTOMY**

CARE OF CHILD WITH TRACHEOSTOMY AND INVASIVE VENTILATION

Rachel Seet Soh Cheng

KK Women's and Children's Hospital, Singapore

OBJECTIVE :

- Indications and complication of tracheotomy
- Tracheostomy tube selection
- Humidification
- Selection of ventilators and other equipment
- Describe routine tracheostomy care
- Identify emergency procedures for the care of patients with tracheostomies
- Transportation

DESIGN :

- Powerpoint presentation

CONCLUSION :

Nursing Management focus:

- Safety
- Prevention of Complications
- Management of routine tracheostomy care
- Invasive and non-invasive ventilation via tracheostomy

**PRE-CONGRESS WORKSHOP 3
TRACHEOSTOMY**

DISCHARGE PLANNING

Rachel Seet Soh Cheng

KK Women's and Children's Hospital, Singapore

OBJECTIVE :

- Introduction of the Multi Disciplinary Homecare Team
- Initial Assessment of patient and family
- Structured teaching
- Assessment of competency
- Respiratory assessment and emergency
- CPR
- Equipment and consumables required
- Transportation
- Smooth transition to home
- Continuity of care and follow up after discharge

DESIGN :

- Powerpoint Presentation

CONCLUSION :

Nursing Management focus:

- Structured training
- Empowerment of parents and caregivers in the care of child with tracheostomy with or without ventilators
- Safe and smooth transition to home
- Promote better quality of life for patients in home setting
- Contain healthcare cost

**PRE-CONGRESS WORKSHOP 3
TRACHEOSTOMY**

CARE OF THE TRACHEOSTOMY TUBE AND O2 DELIVERY DEVICES-(WORKSHOP)

Rachel Seet Soh Cheng

KK Women's and Children's Hospital, Singapore

OBJECTIVE :

- Setup stations for Tracheostomy care
- Emergency tracheotomy tube and CPR
- Ventilators used for tracheostomy patients
- Devices use for monitoring and delivery of O2
- Types of Tracheostomy tubes

DESIGN :

- Workshop stations
- Demonstration of tracheostomy care procedure.
- Display of tracheostomy device, equipment and consumables

CONCLUSION :

- Increase knowledge and skills of participants on tracheostomy care
- Keep abreast with the latest technology with home ventilation via tracheostomy

SYMPOSIUM 1

COMPARE THE ENDOSCOPIC MARSUPIALIZATION AND LACRIMAL DUCT PROBING CURATIVE EFFECT IN TREATMENT OF CONGENITAL DACRYOCYSTOCELE

Sun Peng, Zhang Ya-Mei, Yu Gang, Cui Yan-Hui

Department of Otolaryngology and Ophthalmology, Beijing Children's Hospital, Beijing, China

OBJECTIVE : To compare the endoscopic marsupialization and lacrimal duct probing curative effect in the treatment of congenital dacryocystocele.

METHOD : 30 newborns (33 eyes) who were diagnosed as congenital dacryocystocele, 20 of them were males (22 eyes), 10 were females (11 eyes). We randomly divided all the cases into two groups as group A and B. Group A accepted the treatment of endoscopic marsupialization and Group B got the lacrimal duct probing treatment. Patients were followed-up for 1 year. The curative effect, the incidence of complications and reoperation rate were compared between the two groups.

RESULTS : In endoscopic marsupialization group the curative rate was 100%, the incidence of complication rate was 6.7%, there was no reoperation case. In lacrimal duct probing group, the curative rate was 93.3%, the incidence of complication rate was 20% and the reoperation rate was 33.3%.

CONCLUSION : The efficacy of endoscopic marsupialization in the treatment of congenital dacryocystocele was better than lacrimal duct probing, and the security is more outstanding.

KEY WORDS : Endoscopes; Marsupialization; Lacrimal duct probing; Dacryocystocele

SYMPOSIUM 1

CSF RHINORRHOEA IN CHILDREN

Abhilash Balakrishnan

Department of Otolaryngology, Singapore General Hospital, Singapore

The common causes of CSF Rhiorrhoea are reviewed, highlighting the differences between Adults and Children. Both laboratory and Imaging investigations are discussed. Finally the methods of repair are enumerated, concluding with videos of Endoscopic repair in 2 cases, dealt with by the Author.

SYMPOSIUM 2

DIZZINESS IN CHILDREN

C Gretchen Navarro-Locsin

Molecular Medicine, Research & Biotechnology Division, St Luke's College of Medicine, Quezon City, Philippines

Dizziness is reported to have a low prevalence in children. In the paediatric population, the most common causes are migraine, BPVC, otitis media, vestibular neuronitis, and trauma. Signs and symptoms of dizziness in children are varied and often non-specific. Diagnosis depends on a good history, meticulous physical examination and appropriate diagnostic testing. Clinical history evaluation may take the form of structured questionnaires, checklists, or more commonly, interviews with parents/caregivers. Associated symptoms of headache or vomiting, neurological deficits, history of head trauma, intake of drugs, and family history of migraine, seizures or hearing loss must be elicited in the history. Physical examination should include a general, otologic, neurologic, and vestibular evaluation. Bedside vestibular examination may consist of observation for spontaneous nystagmus, dynamic evaluation tests, saccades, smooth pursuit, Dix-Hallpike or positional testing and vestibulospinal tests. Imaging is indicated only for those patients with neurologic deficits, persistent headache, or history of head trauma. Treatment includes pharmacologic therapy and vestibular rehabilitation therapy. Prognosis of dizziness in children is generally good.

SYMPOSIUM 3

GERD IN CHILDREN: IS IT A MYTH

Rus Anida Awang

Hospital Pulau Pinang, Pulau Pinang, Malaysia

It is common for healthy infants and children to regurgitate partially digested food from the stomach, but in most children this resolves spontaneously by the age of 1 year. However, a significant proportion develop gastro-esophageal reflux disease (GERD), in which persistent reflux causes symptoms or complications.

Typical reflux symptoms in younger children include vomiting, regurgitation, failure to thrive, respiratory difficulties, irritability, sleeping problems, and abdominal pain. Older children are more likely to experience symptoms that are similar to those in adults, such as chronic heartburn, regurgitation and dysphagia. Troublesome reflux symptoms are the key to the diagnosis of GERD, but younger children and infants cannot reliably report their symptoms. It is estimated that between about 2% and 22% of children and adolescents between the ages of 3 and 18 years old experience GERD symptoms and these can severely affect the quality of life of the child and that of their parents and families.

Laryngo-pharyngeal reflux or silent reflux is when reflux material flows back into the oesophagus, but isn't forced out of the mouth. GERD is clinically silent in up to 75% of patients with GERD-related cough. A combination of a medical history, physical examination and one or more tests like pH study or endoscopic examination will help in making the diagnosis. Patients whom will benefit from these investigations are those who have initial symptoms of unclear aetiology, lack substantial response to adequate acid suppression therapy, symptoms suggestive of GERD complications, have atypical or extra-oesophageal symptoms that are possibly related to GERD (silent reflux) and have typical symptoms but need objective confirmation of the diagnosis before anti-reflux surgery is performed.

The primary aims of treatment in childhood GERD are to relieve symptoms, heal reflux esophagitis, if present, prevent respiratory symptoms, prevent complications and promote normal weight gain and growth.

SYMPOSIUM 3

ROLE OF SURGERY IN PAEDIATRIC GASTRO-OESOPHAGEAL REFLUX DISEASE (GORD)

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Paediatric Gastro-oesophageal Reflux Disease (GORD) is quite common in Malaysia. Medical treatment is the gold standard along with diet modification. Surgical referral is usually made after patients have complications from failed medical treatment such as failure to thrive or admission(s) into paediatric intensive care or high dependency unit for episode(s) of aspiration pneumonia. Surgery is warranted for these patients to assist growth and prevent further ICU/HDU admissions. There are various types of surgery for paediatric GORD i.e. gastrostomy, fundoplication or the latest Endosurgery technique. The type of surgery is dependent on severity of GORD. Success of surgery is dependent on patient's central control in swallowing and coordination.

SYMPOSIUM 3

LARYNGOPHARYNGEAL REFLUX IN VOICE DISORDERS

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Laryngopharyngeal reflux (LPR) is a condition where there is retrograde flow of gastric contents into the larynx and pharynx. The laryngopharynx is not designed to withstand this acid exposure and thus damage is done. LPR was first recognized and reported in 1991 by Koufman. He emphasized that it is distinct and different from gastro esophageal reflux in that the lower esophagus is more resistant to exposure to acid than the larynx.

LPR is perhaps the most important contributor to voice disorders besides voice abuse. Any physical mass lesions cannot be adequately treated if LPR is not controlled. The healing process after surgical removal is hampered in the presence of LPR. In functional voice disorders, LPR must be ruled out and treated before speech therapy can be successful.

Unfortunately LPR is subjective. While most patients exhibit hoarseness, there are no definitive diagnostic criteria, no pathognomonic symptoms or signs. And yet LPR is an aggravating factor to hoarseness, throat irritation, foreign body sensation, muscle tension dysphonia and chronic cough. It has been associated with poor healing after laryngeal surgery, formation of scars in the vocal cords.

PPI is diagnosed by 24 hours pH monitoring. Besides being very uncomfortable and expensive, this test is not readily available. Empirical treatment with proton pump inhibitors (PPI) for a period of 2 months have shown to be useful as a diagnostic tool. The use of PPI is safe and besides being diagnostic, is also therapeutic.

Besides the use of PPI, LPR requires its sufferers to have life style modifications. They would have to abstain from hot spicy food, carbonated drinks, tomato based foods and have their last meal 4 hours before going to sleep.

LPR is underdiagnosed in Malaysia. Many practitioners are still not aware of the tell tale symptoms of this condition. This is a pity because PPIs offer valuable relief for this condition.

SYMPOSIUM 4

ENDOSCOPIC ORBITAL AND OPTIC NERVE DECOMPRESSION

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The orbit sits in a bony pyramid shaped cavity consisting of zygomatic, ethmoidal, lacrimal, frontal and maxillary bone. The optic nerve enters the orbit at the apex of the orbit and any increase in pressure by both internal and external lesions could compromise the optic nerve and subsequently the vision. Surgical modalities to decompress the orbit are performed to avoid this complication.

The introduction of endoscope and endoscopic sinus surgery has revolutionized this procedure and has provided a safer alternative. Endoscopic medial wall decompression, was originally described by Kennedy (1990) and then Metson (1994). The primary aim is to relieve exophthalmos accompanied by corneal exposure and disfigurement and to reduce the increased orbital pressure produced by swelling of extraocular muscles, which can lead to compressive optic neuropathy and visual loss. Pre operatively a thyroid function test is carried out to confirm if patient is euthyroid and a CT scan is carried out.

Surgical steps include the total anterior and posterior endoscopic ethmoidectomy with sphenoidotomy, extended maxillary antrostomy that provides inferomedial decompression that also acts as prophylaxis against maxillary sinusitis secondary to ostial narrowing. Subsequently, the lamina papyracea is removed with a strut of bone preserved between the medial and inferior wall decompression to minimize diplopia .

Two to four horizontal periorbital incisions, starting from posterior and extending anteriorly is made. Incision made over the periorbita is not too deep to prevent injury to the rectus muscles. This starts with the inferior incision then superiorly (minimizes orbital fat from obscuring subsequent incisions) .

Endoscopic orbital decompression is also performed for fungal sinusitis, sinonasal tumors, abscesses, and optic nerve decompression is performed for optic neuritis. We have preformed 70 cases of endoscopic orbital decompressions ranging from Graves disease, abscesses and tumors with excellent results. We have performed more than 60 cases of endoscopic optic nerve decompression with excellent results as well.

These cases will also be discussed with video clips. Different case scenarios will be presented accompanied by video clips of the surgery.

SYMPOSIUM 5

NON-SURGICAL MANAGEMENT OF VESTIBULAR SCHWANNOMAS

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Skull Base Schwannomas account for 6-8% of all intracranial tumours. The natural history of these tumours are favourable, and small asymptomatic schwannomas are usually managed with close observation.

Vestibular schwannomas are the most common type. They usually arise from the neurilemmal sheath of the superior division of the vestibular nerve at the junction of the central and peripheral myelin, located about a centimetre distal to the brainstem.

While the usual triad of early presentation are, insidious and progressive ipsilateral sensorineural hearing loss, high pitched tinnitus and disequilibrium, larger tumours can present with symptoms related to dysfunction of adjacent cranial nerves and brainstem compression.

In most cases, vestibular schwannomas requiring treatment are managed surgically. The goal is to achieve total resection of the tumour with preservation of facial nerve function .

Stereotactic Radiosurgery is an increasingly plausible alternative for patients with vestibular schwannomas, as primary treatment, in conjunction with surgery or for treatment of recurrence following surgery. It uses stereotactic localization to precisely focus a large dose of radiation onto the tumour, usually in a single treatment. Various methods are available, differing mainly in the source of radiation and the technique for increasing the dose delivered to the lesion. SRS has shown to control tumour growth in as many as 97% of cases although data on long term follow up is pending.

SYMPOSIUM 6

HOW I EVALUATE THE OBSTRUCTED AIRWAY IN CHILDREN

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Airway obstruction in infants and children may be secondary to lesions of the nose, pharynx, larynx or tracheobronchial tree. Stridor may be inspiratory or expiratory, and it can be the most conspicuous symptom. Laryngomalacia accounts for most cases of stridor, but numerous airway anomalies may be responsible. One may use the history, physical examination, and chest and neck films to guide the evaluation. Specialized imaging techniques or office flexible fiberoptic nasopharyngoscopy may also be indicated, however, bronchoscopy is frequently the mainstay for establishing a conclusive diagnosis. Management depends on the condition causing the airway obstruction, the completeness of instrumentation and the level of competence of the surgeon.

SYMPOSIUM 6

CURRENT CONCEPTS IN MANAGEMENT OF VOCAL CORD PALSY

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OBJECTIVE : The subject of paediatric vocal cord palsy encompasses a range of conditions affecting the movement of the vocal cord. Management of a child with vocal cord impairment is determined by the symptomatology, the findings on clinical assessment, the information provided by the relevant investigations and the impact of the dysfunction on breathing, airway protection and voice.

METHOD : Comparative effectiveness research on retrospective database of all cases of diagnosed laryngotracheal stenosis and vocal cord palsy Jan 2003- Nov 2011

RESULTS : Of 1048 cases requiring operative airway assessment, 242 required intervention. 7 cases of bilateral vocal cord palsy, 8 cases of posterior glottic stenosis, 9 cases of glottic webs, and 12 cases of subglottic stenosis.

CONCLUSIONS : The options of treatment are varied and depends on a variety of covariates, including the age of the child, the experience of the teams involved and the availability of technologies and services that allow successful repair and return to normal function of the larynx.

The talk will include cases of vocal cord injection with gelfoam and fat, cordotomy and arytenoidectomy, post-cricoid splitting with insertion of cartilage grafts, the use of botox, and endoscopic reconstruction of the vocal cord healed furrow.

SYMPOSIUM 6

MANAGEMENT OF AIRWAY HEMANGIOMAS

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Hemangiomas are the most common tumour of infancy. Infantile hemangiomas can occur on a broad spectrum of disease severity ranging from causing life threatening events to causing only cosmetic problems and being completely asymptomatic. The decision to treat would as such depend on the effects of the hemangioma. Those causing visual, respiratory and genitourinary obstruction, high output cardiac failure, perichondrial involvement, ulceration and bleeding would warrant treatment. The reported mortality rate from subglottic hemangiomas in 1961 was 50%. Today, this figure has dropped to 4% due to better understanding of the disease process and advancement in treatment modalities. Indeed, the evolution in the management of infantile hemangiomas has proven this. Management of airway hemangiomas vary from close observation and medication ensuring the child does not go into life threatening airway compromise while awaiting for the child to grow and the lesion to involute to surgery for the extensive life threatening airway hemangiomas. Current day treatment options includes oral steroids, interferon, vincristine, cyclophosphamide, intralesional steroids, endoscopic / open excision, laser and tracheostomy. All these treatment modalities are not without side effects, and in addition, surgery is associated with significant morbidity. Over the past 2years, there have been reports of infantile hemangiomas treated successfully with propranolol. The discovery of propranolol as a novel treatment for hemangiomas could revolutionise the management of these lesions. We will be presenting classic cases of airway hemangiomas causing significant subglottic stenosis and airway compromise, showing good results after the commencement of propranolol.

CHALLENGES IN MANAGING RECURRENT RESPIRATORY PAPILOMATOSIS IN CHILDREN

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Recurrent respiratory papillomatosis (RRP) is a chronic disease of the larynx which poses challenges in dealing with the patients and parents in paediatric cases. The disease is caused by an infection with human papilloma viruses (HPV) especially the HPV-subtypes 6 and 11. It is generally recognized as juvenile onset RRP (JORRP) or the adult onset RRP (AORRP). The symptoms of this uncommon disease may vary from hoarseness to severe obstruction of the airway. A retrospective review of 30 cases treated at Universiti Kebangsaan Malaysia Medical Centre (UKMMC) from 2001-2011 is discussed. There were 17 patients JORRP in which age of onset ranged from 10 months to 10 years old and 88.2% (15 patients) presented at the age of below 5 years old. All of them presented with dysphonia and progressive noisy breathing and respiratory distress. There were 2 cases being treated as “severe asthma” and diagnosis were made upon intubation for “status epilepticus”. Six cases (35%) required tracheostomy but only 1 tracheostomy was performed at our centre and 5 were subsequently decannulated after treatment. The sites of papilloma were confined to glottis in 6 (35%) cases, multiple sites in 11 (65%) which include tonsil, post cricoid, pyriform fossa, epiglottis, subglottic and trachea-bronchial tree. Three (17.6%) cases remain aggressive and 2 (11.7%) cases had a trial of adjuvant therapy with no improvement. Two patients only required 1 to 2 times surgical debulking in a year. Others were well and presumed in remission state. One patient had dysplastic changes after being treated as RRP for 6 years with the age of onset at 10 months old. Hence, it is recommended to have diagnostic laryngoscopy in any child presenting with voice disturbance with or without stridor. Recurrent respiratory papillomatosis should be considered in children when other common pediatric airway diseases either do not follow the natural history or do not respond to treatment of the common disorder. Recurrent respiratory papillomatosis continues to be a frustrating disease as treatment may be associated with significant morbidity and malignant change of the disease is well documented. Surgery is still the mainstay of treatment to provide airway but requires team work with the anesthetist to avoid unnecessary tracheostomy. Due to the recurrent nature of the disease and potential airway obstruction, parental support and education can be invaluable in the management plan for JORRP.

ENDOSCOPIC SKULL BASE

EVOLUTION & REVOLUTION IN ENDOSCOPIC PITUITARY SURGERY- HKL EXPERIENCE

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Pituitary surgery has undergone paradigm shift from an open external approach to a minimally invasive endoscopic approach, through the natural corridors. Evolution in surgical techniques & instruments together with technological development and advancement have resulted in better outcome of the surgery.

We discussed our experienced in treating 150 patients with this minimally invasive surgery. The evolution in the surgical techniques especially in the reconstructions of the defect, the use of the navigation system and the revolution in the concept from hypophysectomy to Functional Endoscopic Pituitary surgery will be discussed.

SYMPOSIUM 7

PAEDIATRIC ISSUES IN ALLERGIC RHINITIS

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Allergic rhinitis is an immune mediated inflammation of the nasal mucosal lining. The paediatric population presents specific peculiarities that impact research and clinical applications in AR. The role of growth and development markedly affects the expression of disease in this population. Epidemiologic trends may be both age and sex dependent. Compared to asthma, AR phenotypes are not as well understood. Diagnosis is a challenge for the clinician because of the unreliability and non specificity of signs and symptoms in this age group. Similarly, assessment of efficacy of treatment is difficult. The varying rates of development of the various organ systems such as the liver and kidney affect pharmacokinetic parameters. These parameters determine drug dose, interval and risk benefit. Ideally, efficacy and safety of drugs used in the treatment of AR should be based on pharmacodynamic data assessed in children. Well designed prospective cohort studies on AR would provide the scientific evidence relevant to a better understanding of this disease in the paediatric population.

SYMPOSIUM 7

DIAGNOSTIC CRITERIA OF PEDIATRIC RHINOSINUSITIS

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BACKGROUND : Pediatric rhinosinusitis is a common problem treated by primary care physicians and otolaryngologists. For the best management, understanding of pathophysiology for the proper diagnosis is a must. Acute bacterial rhinosinusitis following a viral infection treated with short courses of antibiotic therapy will give good results. However, identifying acute recurrent episodes classified as chronic rhinosinusitis without any evidence of bacterial infection can be more challenging for physicians and frustrating for families. In these cases, the physician must address the associated risk factors contributing to the chronic inflammation process.

KEY POINTS : Rhinosinusitis is an inflammatory disease, however viral and bacterial infections can modulate the pathologic process and obscure the pathogenesis of the disease. Allergic rhinitis can disturb epithelial barrier of the nose and paranasal sinuses and give more burden to symptomatology as well as adenoid hypertrophy threaten the structural barrier of the nasopharynx and impair mucociliary transport machinery system.

CLINICAL PRACTICE IMPLICATION : Comparison of symptomatology of rhinosinusitis based on 2007-EPOS Criteria and 2003-Rhinosinusitis Task Force (RTF), AAOHNS toward a gold standard criteria of mucopurulent finding in middle meatus was studied in 82 patients aged 6-18 years old. Sensitivity and specificity of EPOS diagnostic criteria was 73% (95% CI: 56-85%) and 30% (95% CI: 17-46%), while RTF was 80% (95% CI: 64-91%) and 14% (95% CI 5-28%). In pediatric patients, questions of more symptoms is directed to higher probability of disease occurrence. Cough, halitosis mouth breathing, snoring and earache symptoms are clinical manifestations of more profound application of united airway concept in pediatric population. Those symptoms could be elaborated for risk factors identification process and be used as clinical indicators for successful treatment evaluation. Episodes of recurrent less than 3 times in 6 months and less than 4 times in one year period should be considered in objective of successful inflammation control.

KEYWORDS : rhinosinusitis, inflammation, united airway disease

SYMPOSIUM 7

THE USE OF INTRANASAL STEROIDS IN CHILDREN

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Intranasal steroids (INS) have been widely used in children mainly for chronic rhinitis followed by adenoid hypertrophy and sleep disordered breathing. The type of INS used has evolved over the years with the advent of second generation drugs and their improved safety profiles. The concern about their use in children stems from the risk of growth suppression with systemic absorption and hypothalamic pituitary adrenal axis suppression. In children where the benefits outweigh the risk, it is recommended that second generation INS be used at the lowest dose required to control symptoms. When long term use is necessary, INS can be used intermittently if symptoms are controlled. With long term use, growth should be monitored regularly.

SYMPOSIUM 8

WHEN DO AIDED AUDITORY THRESHOLDS REACH THE SPEECH SPECTRUM AFTER COCHLEAR IMPLANT SWITCH ON?

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It is not easy to predict when the aided auditory thresholds of a child with cochlear implants will reach speech spectrum levels.

OBJECTIVES : This paper aims to determine the length of time before a cochlear implantee would reach aided hearing threshold of ≤ 45 dBHL at 5 frequencies (target threshold) and whether there is a difference depending on age of implantation and sex.

METHODS : From January 2009 to February 2011, the aided hearing thresholds of 41 prelingually deaf children with cochlear implants after switch on were reviewed.

RESULTS : There were 21 males and 20 females. Majority of children < 4 years old reached the target threshold gradually before the 12th month of post-implantation ; those who were 4-7 years old reached it within 3 months time while children >7 years old reached it at ≤ 1 month. There was a trend that more females reached the target threshold earlier than the males but this was not statistically significant.

CONCLUSION : Sixty-six percent of the children with cochlear implants reached the target threshold within the first 3 months post fitting and 80% within the first 6 months post fitting. The probability that a female would reach the target threshold on or before 6 months was 90%.

SYMPOSIUM 9

TISSUE ENGINEERING: IN OTORHINOLARYGOLOGY AT UKM MEDICAL CENTRE

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Tissue Engineering is the process where cells are cultured and tissues are fabricated in the laboratory to help restore or establish normal organ function. The cells implanted could stimulate the body's own repair mechanisms to heal previously diseased or damaged tissues or organs. Alternatively, the tissues or organs can be grown in the laboratory and later could be safely implanted when the body cannot heal itself. Researchers in this field prefer to grow patient's own cells. These cells can either be stem cells or differentiated cells and since the cells are autologous in origin, it will not cause any immune response. In the Ear, Nose and Throat field, we have engineered elastic cartilage for the reconstruction of the external ear using the nasal septum cartilage as a cell source. The composite of elastic cartilage and bilayered skin was reconstructed for the future treatment of microtia or injured external ear. As for the microtia patients, we had successfully culture chondrocytes from the microtic cartilage and this cell source could be an important source for external ear cartilage engineering in these patients. The other structure that we had put a lot of emphasis is the trachea. The respiratory epithelium has been culture and proof of concept in animal models has been successful in repairing tracheal defect, mimicking tracheal stenosis. The main cell source for respiratory epithelium is from the nasal turbinate, a waste product after turbinectomy. Our work on the auditory progenitor cells had demonstrated that growth factors supplementation does not improve the phenotype. We have just started to work on the in-vitro 2-D and 3-D respiratory epithelium for drug testing. With the sensitive issue of drug testing in animals, these two potential products will definitely reduce the number of animals needed for drug testing.

AUTOLOGOUS TISSUE ENGINEERED TRACHEA WITH EPITHELIAL CELL SHEETS IN OVINE MODEL

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INTRODUCTION : A variety of inert materials have been used as tracheal prostheses either alone or in combination with autologous tissue. However, difficulties arise with the use of prosthetic materials because of their propensity for infection and extrusion. Moreover, autologous tissues are often times limited by poor structural integrity and their use involves high technical complexity. Our specific goal is the creation of an autologous tissue engineered cartilage construct shaped as a helix to form the structural component of a functional tracheal replacement, with tracheal epithelial cell sheets. The study focused on generating this construct utilizing techniques and materials already within FDA regulation to be able to attain a clinically useful therapy within a reasonable timeframe.

MATERIALS AND METHODS : 5 x 5 mm samples of sheep nasal septum were obtained from 2 month-old sheep. Chondrocytes were isolated by digestion of cartilage in collagenase, and epithelial cells were also obtained from the mucosal lining of the same sample. After 2 weeks of culture, epithelial cells were stored and chondrocyte suspensions were placed on 100 mm x 10 mm x 2 mm polyglycolic acid mesh fibers. This chondrocyte-seeded mesh was placed in the grooves of a 20 mm diameter x 50 mm long helical silicon template and implanted under the sternocleidomastoid (SCM) muscle of the corresponding sheep. 8 weeks post-implantation, the silicon template was removed from the autologous Tissue Engineered Trachea (TET) while keeping the vascularized TET connected to the SCM muscle pedicle. Then, a 10 cm circumferential cervical trachea segment was excised, and the autologous TET was transplanted to the site by an end-to-end anastomosis. The engineered epithelial cell sheet (2 weeks prior to transplantation, epithelial cells were cultured on temperature-responsive culture inserts) was wrapped around the external surface of the TET, including the site of anastomosis. A silicone stent (10 cm) was inserted before completing the distal anastomosis. Internal coverage of the entire length of the TET by the stent was confirmed by bronchoscopy, and the stent was secured in place to prevent migration with two sutures placed at its oral end. Prior to closing the surgical site, the entire vascularized construct was covered with the SCM muscle pedicle. Sheep was euthanized at 4 weeks and the TET was evaluated.

RESULTS : The sheep tolerated the surgical procedure well with no perioperative complications. The proximal and distal anastomosis sites of the TET transplant were clearly visible through the transparent stent, and exhibited no problems at 1 week by bronchoscopy. The gross morphology of the TET was a white, shiny, hard tissue with confirmed epithelization along its entire length, including both anastomosis sites. However, cartilage content of the tissue was less than 10 % of the TET

DISCUSSION AND CONCLUSIONS : We have demonstrated that a long, circumferential tracheal defect can be successfully transplanted with a TET covered with an epithelial sheet and supported by an inert stent. The external wrapping of the epithelial cell sheet is a key point in our study. Our studies in autologous models have shown that viable TETs can be generated with almost any cell source, such as primary chondrocytes or mesenchymal stem cells, in combination with various materials. However, in order to be able to transfer our tissue engineering techniques into the clinic for the benefit of patients, it is also very important to develop appropriate surgical procedures, as well as ideal cell culture conditions and preparation.

BIOPHYSICAL PROPERTIES OF PRESERVED AMNIOTIC MEMBRANE AS AN EPIDERMAL SUBSTITUTE IN ORL-HNS

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Human amniotic membrane (HAM) was used in treating various conditions in the head and neck region and has been successfully used as an epidermal substitute in the treatment of superficial and partial thickness wound. The amnion has been obtained either as a fresh source or through a variety of preserving preparations. The objective of the study was to determine the influence of different preservation techniques on the biophysical properties of HAM, namely oxygen transmission rate (OTR), water vapour transmission rate (WVTR) and the cell structure under scanning electron microscopy (SEM). The effects of different doses of gamma irradiation on these properties were also studied. Screened fresh amnions were either preserved by air drying or dipped in glycerol before sterilized by gamma irradiation at 15, 25 and 35kGy. In the control group (fresh amnion) no preservation and sterilisation were performed. Significant differences ($P < 0.05$) in the OTR and WVTR values were found between the control, air dried or glycerol preserved amnions. Generally, gamma sterilization caused significant effect on the OTR values while it has no significant effect on the WVTR of the preserved amnion. The SEM examination showed that the cell structure was more preserved when stored in glycerol as the cells were beautifully arranged, homogenous, tended to round up. As for the air dried, the cell structure seemed flattened and dehydrated. The intercellular channels and cytoplasmic strands of the air dried were not visible. Biophysical properties of HAM were influenced by preservation methods and glycerol treatment is the best method to preserve the surface structure as the morphology remained closely to the fresh amniotic membrane. Radiation doses lower than 25kGy for tissue sterilization did not affect the appearance of the preserved amnion.

SYMPOSIUM 10

ENDOSCOPIC SURGERY FOR NASOPHARYNGEAL ANGIOFIBROMA WITH THE HELP OF MONOPOLAR COAGULATION

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PURPOSE : Evaluation the endoscopic surgical method with the help of monopolar coagulation for nasopharyngeal angiofibroma

METHOD : 21 cases of nasopharyngeal angiofibroma were treated by surgery at ENT hospital from March 2011 to March 2013. Confirmed diagnosis was based on CT Scan and DSA. Surgical treatment with pre-op embolisation were approved for all cases.

RESULT AND DISCUSSION : All nasopharyngeal angiofibroma cases were classed as stage II. 17 cases were treated by endoscopic surgery with the help of monopolar coagulation and 4 cases were treated by external surgery. We had more disadvantages in surgery with the bigger tumor volume. Pre-op embolisation was required to reduce blood loss. Endoscopic surgery with monopolar coagulation was proved of reducing intra-operative bleeding and good appearance.

CONCLUSION : Endoscopic surgery has also emerged as a viable alternative to traditional external approaches in the management of small to intermediate size nasopharyngeal angiofibroma. Monopolar coagulation in this surgery was well considered in reducing intra-operative bleeding.

SYMPOSIUM 10

ENDOSCOPIC RESECTION OF MALIGNANT SINONASAL TUMOURS

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Endoscopic resection of malignant sinonasal tumours which offer excellent visualisation of the tumour & margin, preservation of uninvolved vital structures , better cosmetic result without facial incision, shorter hospitalisation with less morbidity offer an extra advantage comparing to the external craniofacial approach.

However the issues on inability of enblock removal, cutting through the tumour during piecemeal removal, the width of the margin, involvement of the orbit and dura still need to be addressed.

With the advancement of the scopes technology, the surgical techniques, the instruments, the presence of image guided surgery as well the utilisation of intraoperative frozen section and the use of vascularised flap for repair of the skull base defect, the endoscopic resection of malignant sinonasal tumours should be a valid treatment option to the external approach with equivalent if not superior result.

We discussed the endoscopic resection of malignant sinonasal tumours , emphasizing the above issues.

SYMPOSIUM 10

MANAGEMENT OF PAEDIATRIC RHABDOMYOSARCOMA

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Rhabdomyosarcoma (RMS) is the commonest soft tissue sarcoma in children and accounts for ~3% of all childhood cancers. RMS is a highly malignant tumour which arises from primitive mesenchymal precursors of striated muscle. Although it may occur virtually anywhere in the body, approximately a third of paediatric RMS occurs within the head and neck region and is mostly of the embryonal subtype. Treatment stratification is dependent on the location, histological type (i.e. embryonal, alveolar, undifferentiated), staging (presence of metastatic disease) and molecular characterisation. With the discovery of these molecular markers (eg FOXO1, PAX3, PAX7, p53, N-myc), surveillance is enhanced as identification of these markers (from various tissues and peripheral blood) allows for early detection of recurrence even before becoming clinically evident. As such, availability of molecular diagnostics is essential in managing oncology patients as a whole. A multi-modal and multi-disciplinary approach forms the backbone of treatment. Although the strategies in various treatment protocols may vary, the focus of treatment is still to maximise local tumour control primarily. With the overall improvement of 5-year survival rates of up to ~80%, the challenge is now to obtain a balance between cure and irreversible morbidity for this group of patients.

SYMPOSIUM 11

OVERCOMING THE DIFFICULT CASE IN CHOLESTEATOMA SURGERY

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Surgery for cholesteatoma is one of the common surgical procedures in otology practice. The choice of surgical technique and its indication are already well established. Several surgical procedures have also been well described. However, variability in the size, location and extension of the cholesteatoma plus the unpredictability of the condition of the middle ear, mastoids air cells and variation of vital structures in the temporal bones often makes cholesteatoma surgery a challenging task. Quite often a difficult surgical situation may be confronted during revision mastoidectomy for recurrent cholesteatoma, in extensive cholesteatoma and cholesteatoma with superimposed chronic middle ear and mastoid disease. In these situations, the normal landmarks for identification of important structures such as the facial nerve, tegmen tympani, lateral semicircular canal and the middle ear may be obscured or absent. As such, surgeons should be aware of other technique or approaches to overcome challenging situations during cholesteatoma surgery. Several of these approaches will be described. The facial nerve monitor is one of the most important tools that can assist the surgeon to complete the surgery safely.

SYMPOSIUM 11

REVISION MASTOIDECTOMIES : ENSURING A GOOD OUTCOME

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Canal wall down (CWD) and canal wall up mastoidectomy (CWUP) represent two surgical approaches to middle ear cleft pathology. The majority of CWD procedures were performed for chronic suppurative otitis media with cholesteatoma. Numerous modifications have been introduced to CWD mastoidectomy to avoid some of its drawbacks whilst maintaining the good exposure it provides. The choice of the surgical technique for chronic ear disease depends on a number of factors such as cholesteatoma, age of the patients and preference of the surgeon. However in the case of revision mastoidectomies, majority of the surgeons will do CWD i.e. modified radical mastoidectomy or radical mastoidectomy. The goals of revision surgery are to get dry and safe ear. High resolution computed tomography scan (HRCT) and facial nerve monitoring are required in case of revision surgery. The written consent should be discussed with patient/guardian in length on the surgical procedure, the risk of operation, the aims of surgery and the hearing status. The hidden area of mastoid diseases such as in sinus tympani, digastric ridge, sino-dural angle, anterior epitympanum need to be addressed. Besides identification of the facial nerve landmark, the surgeon must trace the mastoid segment of facial nerve in order to lower the facial ridge adequately. The mastoid bowl should be lined by inferior based flap and superficial temporalis fascia. Adequate meatoplasty is important in order to facilitate post operative ear toilet. Preoperative and post operative hearing test should be documented and the patient should be followed up accordingly.

SYMPOSIUM 12

IMPACTS OF ADENOTONSILLECTOMY ON RESPIRATORY EVENTS IN PEDIATRIC OSA

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The prevalence of obstructive sleep apnea (OSA) in children is reportedly 1-3%. OSA in children is a respiratory disorder during sleep, which is characterized by prolonged partial upper airway collapse and/or intermittent complete obstruction that disrupts normal sleep patterns and normal ventilation during sleep. Therefore, apnea index, hypopnea index, obstructive index, hypopnea index, pulse oxygen desaturation events were all well-defined in children with sleep-disordered breathing (SDB) or OSA. Moreover, adenotonsillectomy (AT) is widely recognized as the most effective first-line therapy of childhood sleep apnea, which can be proved by significant improvement in both obstructive or saturation parameters and quality of life.

However, there is still more information among the overnight polysomnography (PSG), which include the other respiratory characteristics and sleep architectures. In contrast to the abundance of knowledge regarding obstructive parameters, the other respiratory characteristics and related sleep events have received limited attention with controversial definition among the pediatric population. For example, central apnea index, REM related or non-REM related sleep disorder etc...

Therefore, the main purposes of this presentation was to elucidate the impacts of adenotonsillectomy in children with OSA on their respiratory events, sleep architectures, and quality of life based on the polysomnographic parameters and OSA-18 questionnaire. Further discrepancy between objective sleep parameters and subjective quality of life improvement after AT in OSA children will be discussed.

SYMPOSIUM 12

SLEEP ENDOSCOPY FOR PERSISTENT OSA

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OBJECTIVE : Sleep endoscopy is a technique still in its infancy. Described first in 1991, it has now routinely used in defining sites of upper airway obstruction by trying to mimic the sleep process using anesthetic medication. It has allowed surgery of the upper airway to be more target oriented, improving on variables that contribute to the critical collapse of the airway.

METHOD : Online database collection of potential literature published since 1991, on the subject of sleep endoscopy.

RESULTS : Systematic review of current studies till 2013.

CONCLUSIONS : This topodiagnostic procedure for cases with persistent OSA has allowed the confirmation of the need to improve the velopharyngeal airway, to correct supraglottic stenosis/collapse, and to highlight the impact of neuromuscular tone on the collapsible upper aerodigestive tract.

The talk will highlight speaker's own experience in developing a consistent anaesthetic and ENT protocol for assessment. The talk also allows the development of diagnosis targeted surgical therapy in the field of obstructive sleep apnoea surgery, at the nose, in the velopharynx, the base of tongue, mandible distraction osteogenesis and epiglottic repositioning procedures.

SYMPOSIUM 14

RECOMMENDED HEARING SCREENING TOOLS IN THE NEWBORN

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OBJECTIVE : To identify the outcomes of hearing screening using different protocols of both Distortion Product Otoacoustic Emissions (DPOAE) and Automated Auditory Brainstem Response (AABR) tests in the same ear of the babies in a neonatal unit population.

METHODS : A cross-sectional study was carried out on babies who were admitted into a neonatal unit. By using a formula of single proportion and considering 20% drop out, the number of sample required was 114. The subjects were chosen by using a systematic random sampling. The infants selected were subjected to DPOAE followed by AABR tests screening at the same setting before discharge.

RESULTS : There were 73 newborns (61.6% male and 38.4% female) participated in this study with a total of 146 ears screened. Ototoxic medication was the most common risk factor followed by hyperbilirubinaemia and low birth weight. AABR had higher passing rate (82.9%) as compared to DPOAE (77.4%). The highest passing rate was achieved if the protocol of either passed DPOAE or AABR was used (90.4%). The rate was lower when auditory neuropathy spectrum disorder (ANSD) has been considered (82.9%).

CONCLUSION : AABR has a higher passing rate as compared to DPOAE. However, the use of both instruments in the screening process especially in NICU will be useful to determine the infants with ANSD who may need different approach to management. Therefore, a protocol in which newborns are tested with AABR first and then followed by DPOAE on those who fail the AABR is recommended.

SYMPOSIUM 14

SYNDROMIC CONGENITAL HEARING LOSS

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Congenital hearing loss (HL) with craniofacial syndromes is a common occurrence. It can be divided into conductive hearing loss (CHL) and sensorineural hearing loss (SNHL). Some of the children with syndromes associated with SNHL, CHL and mixed HL for example in Down syndrome. Many of these children with syndrome disorders involve either in structural malformation of the outer or middle ear or in inner ear. Some of syndromic congenital HL associated with genetic disorder for example trisomy 21 and Crouzon syndrome. Crouzon syndrome, it is known as a branchial arch syndrome. Specifically, this syndrome affects the first branchial (or pharyngeal) arch, which is the precursor of the maxilla and mandible. Treacher Collins syndromes (TCS) often have both cleft palate and hearing loss, in addition to other disabilities. Hearing loss in TCS is often secondary to absent, small, or microtia and commonly results from malformations of the middle ear. Pierre Robin sequence (PRS) are at greater risk for hearing impairment than persons with cleft lip and/or palate without PRS. The goals of treatment in infants with Robin sequence focus upon breathing and feeding, and optimizing growth and nutrition despite the predisposition for breathing difficulties. Apert syndrome has a high occurrence of middle ear disease, otitis media and conductive hearing loss. Infective causes of congenital hearing loss such as Rubella and Cytomegalovirus infants should have full work up as they may develop late onset of HL. Children with syndromic HL who has early intervention programme such as hearing aid fitting, speech and occupational therapy will developed normal language development. Syndromic infants with SNHL need to have early work up for cochlear implant candidacy. All neonates with syndrome need to have hearing screening test, Otolaryngology examination and proper audiological assessment.

SYMPOSIUM 14

DEVELOPMENT OF A NOVEL BIO-ABSORBABLE GROMMET TUBE

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PURPOSE : We developed a novel ofloxacin-eluting biodegradable ventilation tube (VT) with sustained release and antibacterial properties for patients with otitis media with effusion.

METHOD/DESIGN : VTs were fabricated by injection moulding technique. In vitro drug release and degradation of VT was studied in water over 3 months. Antibacterial property was evaluated by inoculating VT with *Pseudomonas aeruginosa* suspension for 6 days. Surface morphology was analyzed using scanning electron microscopy (SEM). A randomized animal study was conducted. Guinea pigs were divided into 2 groups: (1) Biodegradable drug-free VT; and (2) Biodegradable ofloxacin-loaded VT. In each ear of all animals, Mini Shah type VT served as a control. Myringotomy and VT insertion were performed under operating microscope. SEM of VTs and histology of specimens were done at 2, 4, 10 and 18 weeks.

RESULTS : About 81.7% of ofloxacin in VT was eluted over 3 months. Biodegradable VTs had smoother surfaces, and less bacteria adherence compared to Mini Shah VTs. VTs loaded with ofloxacin had the least bacteria adherence. VTs showed neither inflammation nor otorrhea 18 weeks post-insertion in guinea pigs. Histology showed the new VTs were biocompatible. The VTs were still functioning and patent after 18 weeks post-insertion, but had started degrading.

CONCLUSION : The novel biodegradable ofloxacin-loaded VT with sustained drug release technology and antibacterial adherence property was developed. Patency beyond 4.5 months allowed an adequate period of ventilation. The complete degradation of the VT warrants further studies to evaluate its duration of VT resorption in situ; and healing of the ear drum.

SYMPOSIUM 14

DEVELOPMENT OF A NOVEL CLINIC-BASED APPLICATOR FOR GROMMET TUBES

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PURPOSE : We developed a novel, simple and automated quick “point-click-insert” handheld ventilation tube (VT) applicator allowing patients with middle ear effusion to be treated in doctor’s office.

METHOD/DESIGN : The applicator is composed of four integrated components – that are mechanical micro-toolset system, sensing system and motion/manipulation algorithm. (1) The micro-toolset system consists of a hollow, needle-like cutter customized to minimize trauma on ear drum during myringotomy. The needle is embedded in another hollow cylindrical VT holder, which is connected to a two-stage piezomotor used for manipulating the VT through the incised ear drum. A servo motor fixed on the piezomotor is responsible for needle retraction after myringotomy. (2) The sensing system utilizes a 0.5 mm fiberscope which is embedded in the hollow cutter to provide images of ear drum. An image processing and pattern recognition system affirm the point the myringotomy, while a force sensor mounted on the piezomotor stage provide information on ear drum contact and penetration of cutter. (3) The manipulation algorithm is a special, rapid motion profile to control the micro-movement of holder and weave the VT into the ear drum. Bench testing of applicator using artificial polyethylene (PE) ear drum and extracted pig ear drum was conducted.

RESULTS : The effective dimension of the handheld prototype was 10.0 cm (L) × 4.5 cm (W) × 15.5 cm (H) with a weight of 220g. The outer diameter of the VT holder to deliver VT was 2.5 mm. The optimized frequency and amplitude of vibration during myringotomy were 20Hz and 0.65 mm, respectively, creating a slit of 1.3 - 1.6 mm on ear drum. The sensing system was capable of consistently guiding the cutter to the predetermined desired incision site. The current procedure time from touching the ear drum to complete insertion takes about 4.0 to 6.7 sec, depending on the feedback signal from sensing system. Test on flat PE ear drum using Mini Shah type VT showed 94% success rate, while that using PE ear drum attached with artificial malleus bone gave a success rate of 92%. Ex-vivo trial on pig ear drums has achieved 83.3% success rate.

CONCLUSION : A novel surgical device for office-based myringotomy and VT insertion was designed to address the drawbacks of conventional surgery. The device can complete the procedure in a very short time, more consistently and accurately, without requiring large surgical equipment and operating room time. It potentially negates the need for general anesthesia especially in children, minimizing the risk of adverse effects whilst improving life quality of patients.

SYMPOSIUM 15

PAEDIATRIC HEAD AND NECK MASSES

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Neck masses are a common in children. Certain caveats of the history and physical are crucially important. They are often categorized as congenital, inflammatory, or neoplastic. The vast majority of neck masses are inflammatory with up to 40% of infants and 55% of children having palpable benign cervical lymph nodes. Workup of a pediatric neck mass to aid in diagnosis, the most common types of neck masses, and review management for many of these masses are briefly described.

SYMPOSIUM 16

USEFULNESS OF ALLERGY TESTING – BLOOD AND SKIN PRICK TESTS

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Worldwide, allergic diseases such as food allergy, eczema, allergic rhinitis and asthma are increasing in prevalence and incidence. This increasing trend constitutes a global public health issue and leads to significant morbidity with impaired quality-of-life. Early assessment of the immunoglobulin E (IgE) sensitisation status has a major impact on clinical outcome and selection of therapeutic options.

Allergy testing needless to say is hence a very important diagnostic process when coupled to the relevant clinical background information. With allergy testing, specific allergens are identified which allows appropriate avoidance measures and disease monitoring. Specific allergy treatment can be initiated via conventional pharmacotherapy and when indicated, allergen-specific immunotherapy. In addition, early identification of infants at high risk is made who may progress to develop allergic diseases.

Once an allergic disease is suggested from the clinical history and examination, which together is paramount towards diagnosis, allergy testing should be done via a skin prick and/or specific IgE via blood test. It is imperative that allergy testing is done using validated testing methodologies. Differences in these methodologies will be highlighted, as will the advances in specific IgE testing which reflect the growing field of molecular medicine which is no less important in molecular allergology. These advances may aid in the assessment of the severity of allergic reactions, particularly anaphylaxis, and hence assist in the overall treatment strategies.

SYMPOSIUM 16

MANIFESTATIONS AND MANAGEMENT OF MPS IN ENT

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The mucopolysaccharidoses(MPS) are inherited metabolic disorder, due to specific lysosomal enzyme deficiencies, and glycosaminoglycans(GAGs) accumulated in all connective tissue of the bodies. ENT manifestation of MPS disorders may contribute to three broad groups: Otologic problems, adenotonsillar hypertrophy, and airway problems.

The ear canal may be deformed with GAGS deposit, otitis media with effusion is not uncommon.

Adenotonsillar hypertrophy is almost universal in MPS patient due to GAGs deposition. Macroglossia and thickness of pharyngeal wall are seen in the same deposition. Progressive upper airway obstruction with OSAs are seen. Initially adenotonsillectomy is usefulness for relief of obstruction but it might not be crucial. Nasal CPAP is used in later develop airway compromise. Tracheostomy is required in extreme cases. The complication of tracheostomy usually caused by a)inflammation of the tracheal mucosa and subsequent narrowing, b)short thick neck, c)deposition of GAGs in soft tissue around the larynx and trachea.

Progressive airway compromise with deposition of GAGs in the pharynx and larynx, and cause laryngomalacia like stridor. Laser treat the redundant supraglottic tissue is very difficulty because short immobile neck with macroglossia and stiffness T-M joint, rigid laryngoscopy or bronchoscopy are usually failed to approach. Trachea deformity was caused by the deposition of GAGs in the tracheal wall. But in type Iva cases, Flexion and kinking of the trachea was arised from disproportion length of the trachea and spine.

Anesthesia would be unwise for non-life threatening procedure, cardiovascular manifestations and difficult airway access caused the high risks for general anesthesia. Normal anesthesia intubation may be impossible, laryngeal mask airway may be secured for non intubated anesthesia.

SYMPOSIUM 17

MIDDLE EAR TUMOURS

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Tumours of the ear can be benign or malignant. Benign lesions of the middle ear comprise a diverse spectrum of local and systemic diseases that have manifestations within the temporal bone. Despite their benign histopathological characteristics, these lesions may be locally destructive. Prompt diagnosis and treatment are therefore necessary to prevent progression of audiologic, vestibular, and facial nerve dysfunction, which may also be present. Primary tumours with glandular structures, such as ceruminoma, choristoma, monomorphic adenoma, and adenoid cystic carcinoma, are uncommon. A carcinoid tumor of the middle ear is a very rare neoplasm that represents a class within the spectrum of adenomatous neoplasms. Some of these uncommon lesions are not well characterized, with a variety of confusing nomenclature and classification schemes based upon historical precedent or an incomplete knowledge base.

The middle ear is a rare site for primary malignant tumours. Middle ear carcinoma is rare and can masquerade as a benign aural polyp. The neoplasms most commonly encountered at this site in adults and children are squamous cell carcinoma and rhabdomyosarcoma, respectively. Symptoms of severe otalgia and inner ear disturbances are indicators of possible malignancy, as are recent onset symptoms of otitis media developing over a relatively short course later in life. A high index of suspicion is needed to avoid late diagnosis. Repeat deeper aural tissue biopsy is needed to exclude malignancy. Computed tomography imaging is indispensable in delineating tumor extent and aids in tumour staging as well as prognostication. Surgical resection with clear tumour margins, followed by postoperative radiotherapy, is the preferred choice of treatment. Sole radiotherapy is reserved for tumours of small volume as well as in cases where surgery is not feasible.

Five cases of malignant tumour of the ear are presented. They presented to the Department of ORL, Kuala Lumpur Hospital in 2013 at the different stages of disease. Different types or modalities of treatments to these patients are described.

SYMPOSIUM 19

MANAGEMENT OF INTRAOPERATIVE BLEEDING DURING SINONASAL SURGERY

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The advent of endoscope has revolutionized endonasal sinus surgery. The improved visualization has enabled precise surgical excision and this has led to more complex cases that were previously performed via conventional headlight to be performed endoscopically. This includes sinonasal tumors, encompassing both benign and malignant, skull base lesions etc.

A major disadvantage of endoscopic surgery is the reduced vision field during bleeding intraoperatively and managing this bleeding can be quite a challenge. This presentation addresses the different clinical scenarios where bleeding is encountered and their principles of management. They are highlighted with video clips of each procedure and highlight when to use sergicel, gelfoam, bipolar cautery, monopolar cautery, endoscopic sphenopalatine artery cautery in different clinical scenarios.

SYMPOSIUM 19

EPISTAXIS AND THE ROLE OF THE INTERVENTIONAL RADIOLOGIST

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It is estimated that 60% of the adult population have experienced epistaxis at least once in a lifetime; only 6% of patients with epistaxis require treatment. Although the cause of epistaxis is not determined in most cases, possible etiologies include postsurgical complications, facial trauma, neoplasms, coagulopathy, vascular malformations, arterial hypertension, and hereditary hemorrhagic telangiectasia (HHT).

Epistaxis can usually be controlled by conservative means such as local pressure, anterior and posterior nasal packing, and vasoconstrictors. However, these conservative therapies are not always effective in some patients with posterior epistaxis. When conservative management fails, epistaxis is termed intractable.

Before the emergence of interventional radiology, the treatment of choice in these cases was surgery. In the last 20 years, the role of embolization of the external carotid artery (ECA) territory has become increasingly more important, mainly for transarterial endovascular treatment of treatment of epistaxis, dural arteriovenous fistulas, and preoperative embolization of head and neck tumors to decrease surgical blood loss.

A rapid, targeted epistaxis embolization can be performed when the clinical suspicion of a bleeding source correlates with a focal arterial anomaly on diagnostic angiography despite the presence of diffuse, bilateral mucosal hypervascularity. Transarterial embolization often follows an unsuccessful attempt at controlling the epistaxis via an endoscopic approach. Communication between the ENT specialist and the interventional neuroradiologist is essential to the correlation of the bleeding source with an angiographic anomaly.

Transarterial embolization of epistaxis is a safe, cost effective procedure when performed with adequate technique. During the procedure, an understanding of the potential dangerous

anastomosis is crucial to avoiding the passage of embolic material from the extracranial circulation into the anterior circulation, which could result in a stroke, blindness or cranial nerve palsies.

SYMPOSIUM 20

CANALPLASTY : SURGICAL TIPS

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Although Bone Anchored Hearing Aids (Baha) and middle ear implants have greatly changed the way we managed children with microtia and congenital aural atresia. Although canal reconstruction or canalplasty is seldom performed in congenital aural atresia, it remains a surgical procedure otologists need to perform in conditions such as canal cholesteatoma, congenital or acquired stenosis and exostosis or other benign tumour in the ear canal. Canalplasty has a high rate of restenosis if not properly performed, with a poor long term hearing outcome. A detailed high resolution CT scan is important as an intra-operative guide for the surgeon during drilling towards the middle ear. It is very important to remove maximally the bony atretic plate to obtain a larger than normal canal, while not exposing the mastoid air cells. During drilling, normal skin of the canal, should be preserved if available. The author use thin split thickness skin graft harvested from under the arm to line the constructed canal. Silk sheet is used to assist in lying down the skin graft. Effectiveness of the skin graft is one of the most important factor in the success of canalplasty. This include meticulous skin care post operatively and re-grafting of the canal if required.

Proper planning and timing of surgery

Canalplasty : proper patient selection

- normal cochlear function
- normal or near normal ossicles & pneumatization of middle ear
- Detailed radiological studies (HRCT)
- CANAL CHOLESTEATOMA : identify and treat early
- Meticulous surgery : remove all or most of bony atresia
- Effectiveness of skin graft is a major factor for success
- When unfavorable for canalplasty : Bone Anchored Hearing Aid (BAHA)

SYMPOSIUM 20

PARENTAL COUNSELLING IN CONGENITAL EAR ANOMALIES

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Congenital ear anomaly has a devastating psychological impact upon the child's parents, and it has the potential for lifelong impact upon the physical, psychological and socioeconomic well being of the child. Ear malformations can severely affect a child's self-image, especially if the condition is allowed to go uncorrected until school age. In some cases it is associated with hearing loss and multiple anomalies. This constellation of defects suggests the need for multidisciplinary approach to diagnosis and treatment. Parental counselling by the surgeon and the paediatrician as soon as the anomaly is identified is important to help the parents deal rationally with treatment options because timing of surgery is often an important factor in improving the prospect for a successful outcome. They also may counsel the parents regarding the emotional, psychological, rehabilitation and financial resources. Parents should be informed regarding potential complications of surgery and the prognosis. In certain situations, it is beneficial to provide accurate genetic counselling.

SYMPOSIUM 21

LOWER CHEEK FLAP APPROACH FOR INFRATEMPORAL FOSSA TUMOURS

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The objective of this lecture is to share our experience in UKM Medical Centre in performing the lower cheek flap for access to the infratemporal fossa tumour combined with the neurosurgical approach. Infratemporal fossa tumours are usually extensions from surrounding structures. Tumour extending into this region pose a surgical challenge due to its difficult access and various important structures contained within it. The description of this approach will be discussed. Two unusual tumours involving the infratemporal fossa and middle cranial fossa were excised using this combined approach. The infratemporal fossa tumour was assessed via lower cheek flap while the intracranial portion was resected from above via craniotomy. This combined approach allows optimal exposure to tumours in these region. It has less complication and better aesthetic outcome compare to other approach.

SYMPOSIUM 21

ENDOSCOPIC SURGERY OF THE PTERYGOPLALATINE AND INFRATEMPORAL FOSSA

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The advent of endoscope has revolutionized sinus surgery. The improved visualization and access has enabled surgeons to reach surrounding structures and treat the pathological conditions accordingly. Skull base lesions still remain a diagnostic challenge despite advancements in imaging modalities as preoperative biopsies are sometimes not feasible. The advent of endoscope has also revolutionized surgery in the Pterygopalatine and Infratemporal Fossa that traditionally required maxillary swing and mandibular split. These cases can now be formed via the nostril with an endoscope with minimal morbidity and a much shorter post operative hospital stay. This complex anatomy that is filled with multiple nerves, arteries, venous plexus with skull base as the roof with Foramen Rotundum and Ovalae present a challenging scenario for the surgeons.

This lecture will highlight anatomy, lesions in this condition and are full of videos of different pathologies in the Infratemporal Fossa and Pterygopalatine Fossa ranging from Angiofibroma, NPC, Schwannoma to Ameloblastomas

THE VALUE OF MOLECULAR APPROACH IN NEW BORN HEARING SCREEN PROGRAMME

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Molecular diagnosis used to be an afterward labor-intensive and time-consuming task for congenital deafness patients identified from the universal new born hearing screen programme based on electrophysiological methods like OAE(otoacoustic emission) and/or AABR(automated acoustic brainstem response). Due to updating knowledge of auditory molecular biology and more cost-effective molecular diagnostic technology including NGS(next generation sequencing), we may rethink the potential role of this approach method in the future.

First of all, genetic diagnosis elaborates to provide etiological answers for parents of congenital deafness new born babies who are one half or two-thirds of genetic causes. Evolving new sequencing method such as NSG implements high sensitive and specific results in reasonable working days compared with traditional methods like linkage mapping, capture based techniques, Sanger sequencing. The more detail diagnosis, the more informative counseling afterward.

In high risk groups, prenatal diagnosis or embryo selection in IVF(in vitro fertilization) is hard to achieve obviously by conventional universal new born hearing screen techniques. However, genetic test takes the advantage in such situations and paves the way for incoming gene therapy.

Comprehensive molecular diagnosis results might eliminate false negative rate in the universal new born hearing screen programme. Not all hereditary hearing loss victims are congenital deaf when are born within 24 hours. Patients of autosomal dominate pattern are usually post-lingual onset hearing loss, therefore escape as normal from new born screen time point. Accurate biological test is able to foretell the clinical course.

Last but not least, molecular diagnosis test for hearing loss could provide genetic susceptibility information about the auditory system. For example, babies with mutations in mitochondrial genome are not deaf until receive glycoside antibiotics.

In conclusion, molecular approach might integrate with electrophysiological means in the universal new born hearing screen programme, no matter prior to, parallel with, or afterwards.

REVIEW OF COCHLEAR IMPLANTATION IN TAIWAN AND PERSONAL EXPERIENCE IN CHANG-GUNG MEMORIAL HOSPITAL

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OBJECTIVES : The aim of this report was to review the development of cochlear implantation in Taiwan and personal experience in Chang-Gung Memorial Hospital

STUDY DESIGN : retrospective

METHODS : review the general development of cochlear implantation in Taiwan from 1991 till now and report the recent survey results by the resource center under the Minister of Internal Affairs using the children questionnaire adopted and modified from (MRC Institute of Hearing Research, England, 2005) and the adult questionnaire from (the Hearing Handicap Inventory, USA, 1985-1986). Also the outcome measures such as the speech perception, speech production and speech intelligibility (CAP and SIR), language development, intellectual ability [D. Wechsler Intelligence Scale for Children (WISC)] and educational settings was utilized to evaluate the long term outcomes of 339 patients followed-up by author.

RESULTS : In the national survey, 257/612 (41.99%) of children and 63/223 (28.25%) of adult questionnaires was retrieved. About 90% of the parents regard it is a correct decision to receive the cochlear implants for their children and 80% of them receive subsidiary from our government and private donations like ours from the Formosa Group. 90% of the implantees receive the auditory-verbal rehabilitation in some way and in professional rehabilitation facilities (the first Audio-Verbal rehabilitation centre such as Children's hearing foundation founded in Asia in 1996, the National Women League foundation for the hearing impaired, Taiwan). In personal study about long-term Speech Intelligibility and Categorical Auditory Performance in Mandarin-speaking Prelingually Deaf Children with Early Cochlear Implantation in Taiwan. Compared to the results reported by English-speaking country, our growth of CAP and SIR seems to be slightly faster. In intellectual ability study, our results show that the verbal score of WISC-R of these implant users varied greatly. The range of their score was as great as the range among normal hearing subjects. The distribution of verbal IQ was significantly different from that of the hearing population. A much larger proportion (32%) falls into the category of "Intellectual Deficiency" and relatively smaller proportion in the "Average" and "Above Average" level. As for performance IQ, the distribution was not significantly different from the norms. the verbal IQ was significantly affected by gender (Female > male, $p=0.004$), side of implantation (Bilateral > Left > right, $p=0.017$) and two speech test scores (PB score $p=0.036$; sentence, $p=0.002$), but not by age of implantation ($p=0.621$) or length of implant usage ($p=0.480$). Only moderate correlation ($r=0.49$) was found between verbal and performance IQ.

CONCLUSIONS : The efficacy and efficiency of cochlear implantation in patients with bilateral profound hearing impairment in Taiwan have been demonstrated from our experience and the future prospective in this field is bright.

SURGICAL CHALLENGES IN COCHLEAR IMPLANTATION

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The standard surgical procedure for implantation of the electrodes in cochlear implant surgery is through a cortical mastoidectomy, followed by posterior tympanotomy and drilling a cochleostomy into the scala tympani close to the round window. As this procedure is performed in non-diseased temporal bones, relevant anatomical landmarks are commonly well identified and the procedure can be quite straight-forward. However, there are certain abnormalities or conditions that may pose significant surgical challenges during cochlear implantation. They can be broadly categorized into 3 categories :

1. Grossly normal temporal bones but with abnormal variation of important structures. Examples of such variations are : a superficially or laterally placed mastoid segment of the facial nerve, an large and anteriorly placed sigmoid sinus, a posteriorly placed round window niche, and a well pneumatized hypotympanic air cells that maybe mistaken for the round window.
2. Abnormal temporal bones and cochlea. Nowadays, more children with congenital abnormalities of the cochlea and the temporal bones are receiving cochlear implants. These abnormalities are well identified preoperatively and various surgical technique have been described to overcome some of the difficulties. Anatomical abnormalities may also be acquired such as in labyrinthitis ossificans and implantation in patients with mastoid cavities.
3. Hearing preservation surgery. Advances in developing new atraumatic electrode designs has enabled hearing preservation surgery in cochlear implantation. In hearing preservation surgery the surgeon is challenged to achieve atraumatic insertion of the electrodes through the round window.

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THE EXIT PROCEDURE, THE KK HOSPITAL EXPERIENCE

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OBJECTIVE : To present the first case of an EXT procedure performed in KK Hospital.

We present a case of a 37 year old woman, gravida 1, para 0. On antenatal follow up, the fetus was diagnosed with an oropharyngeal mass. An intrauterine MRI performed at 29 week gestation showed a 4 cm tumour in the upper aerodigestive tract with complete upper airway obstruction. A multidisciplinary team comprising of Obstetricians, Otolaryngologists, Anaesthetists, Neonatal physicians and Cardiothoracic surgeons was assembled for an ex utero intrapartum treatment (EXIT) procedure. The mother developed premature contractions at 31 weeks gestation, and an emergency lower segment caesarian section (LSCS) was performed. Only the head and left arm of the fetus was delivered, and maternal fetal circulation was maintained throughout the procedure. A vascular 7 cm tumour occupied the entire oropharynx, and an emergent tracheostomy was performed to secure the fetal airway. There were no episodes of desaturations throughout the procedure and the child was admitted to the neonatal ICU. On day 8 of life, the child underwent transoral resection of the tumour. A large vascular tumour was found, pedicled to the tongue base. There was pressure necrosis of the tip of the anterior tongue, atrophic ramus of the mandible and a large palatal cleft. Histology confirmed an immature grade 3 teratoma. At 5 months follow up, a suspected recurrence of the tumour was detected on direct laryngoscopy and the patient is currently being worked up for a repeat resection.

OBSTRUCTIVE SLEEP APNEA AMONG MALAYSIAN CHILDREN : TREATMENT MODALITIES AND OUTCOMES

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STUDY OBJECTIVE : To determine the treatment modalities used in the management of paediatric OSA in UMMC and their outcomes.

DESIGN : An observational study to identify patient with obstructive sleep apnoea (OSA) based on polysomnogram (PSG) results and to correlate their treatment outcomes following medical or surgical intervention using the Chervin paediatric sleep questionnaire (Chervin PSQ) before and after treatment. Variables taken into account include body mass index (BMI), neck circumference, grading of adenotonsillar hypertrophy, Friedman tongue position (FTP) and craniofacial anomalies/syndromes.

PATIENT : All children aged 18 years old and below who underwent PSG at University Malaya Medical Center over a 1.5 year period.

INTERVENTION : After OSA was confirmed by the results of technician-attended nocturnal PSG, patients are treated with medical therapy or surgical intervention depending on the severity and cause of the OSA. They will then be followed up to assess the progress response to treatment taking into account the variables mentioned above.

RESULT : We present our preliminary data based on data collected over the past 1 year. Of the children confirmed to have OSA base on PSG, the ration of males to females 10:7. The average age was 6 years old. The main reason for referral was snoring followed by witnessed apnea and restlessness in sleep. 47% were obese, obesity being defined as BMI of >95th percentile for age and gender. Of those with obesity, 53% had grade 3 tonsillar hypertrophy and 53% had severe OSA. Of the children under the obesity clinic follow up, none had achieved the target weight reduction after 6 months. All the patients who underwent adenotonsillectomy showed improvement based on the Chervin PSQ regardless of confounding variables. The main treatment modality for severe OSA was tonsillectomy.

CONCLUSION : The first modality of treatment in moderate to severe OSA should be adenotonsillectomy in children with adenotonsillar grading of 2 or more.

MANAGEMENT OF CONGENITAL LARYNGEAL CLEFTS

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OBJECTIVES : Laryngeal cleft is a really rare congenital disease of neonate and infant. Few studies published recently had showed that endoscopic repair was a reliable technique for the treatment of mild to moderate laryngeal clefts. The objectives of this study are to present our limited experience in detail about clinical management which include endoscopic surgical repair and conservative treatment.

MATERIALS AND METHODS : With a retrospective review, patients diagnosed as congenital laryngeal cleft and treated in our department over the past fifteen years were all enrolled in this study. Patient demographics, cleft type, endoscopic repair record, associated congenital abnormalities and tracheostomy intervention were all be evaluated and summarized.

RESULTS : Total eight patients with laryngeal clefts (Benjamin-Ingilis classification system : five type I, two type II and one type III) were identified. Six patients underwent primary endoscopic repair. And two of the six patents required revised endoscopic repair surgery. Another two patients were misdiagnosed as laryngomalacia alone at other hospitals and accepted laser supraglottoplasty which caused limitation of endoscopic repair procedure.

CONCLUSION : Early and accurate diagnosis are really essential for treatment of laryngeal cleft patients. Previous misdiagnosis and improper surgical intervention may cause limitation of endoscopic repair surgery. Even if endoscopic repair is a useful technique and has excellent result, performing the procedure is still full of some challenges to surgeon. Tracheostomy approach timing should be individualized based on patient's preoperative airway condition or even if postoperative complications after repair.

IMPACTS OF BLOOD PRESSURE AFTER ADENOTONSILLECTOMY IN CHILDREN WITH SLEEP DISORDERED BREATHING

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INTRODUCTION : Sleep disordered breathing (SDB) in children is widely recognized associated with adverse cardiovascular consequences. However, impacts of adenotonsillectomy (AT) on blood pressure in children with SDB remain unclear.

OBJECTIVES : To investigate blood pressure changes after AT in SDB children, and to investigate impacts of AT on blood pressure in SDB children with different levels of adiposity and disease severity.

METHODS : Totally 146 children were recruited. All the children had SDB-related symptoms, preoperative overnight polysomnography (PSG), and subsequent PSG within 3 months after AT. Blood pressure was measured three times after each PSG in a sleep lab. Subgroup analysis was done to compare the impacts of AT on blood pressure between different levels of adiposity (i.e. obese vs. non-obese), and disease severity (i.e. primary snoring vs. obstructive sleep apnea (OSA)).

RESULTS : After surgery, the mean apnea-hypopnea index (AHI) decreased from 13.5 ± 17.4 to 1.7 ± 3.9 event per hour ($p < 0.001$). The systolic blood pressure (SBP) and diastolic blood pressure (DBP) decreased significantly after surgery in all participants (110.3 ± 9.1 to 107.5 ± 10.6 mmHg, $p = 0.008$; 68.0 ± 10.1 to 65.3 ± 10.2 mmHg, $p = 0.017$; respectively). Non-obese children showed a significant decrease in both SBP and DBP after surgery ($p = 0.004$ and $p = 0.001$, respectively), while obese children had no significant postoperative blood pressure changes. Children with primary snoring ($AHI < 1$) showed a significant decrease both in SBP and DBP after surgery, whereas those with OSA revealed significant drop in SBP only.

CONCLUSIONS : SBP and DBP decreased significantly after AT in children with SDB. Non-obese children had a decrease in blood pressure more than obese children. Primary snoring children had a decrease in both SBP and DBP. A long-term follow-up study with ambulatory blood pressure monitor after surgery is warranted to elucidate the impacts of childhood SDB/OSA on blood pressure.

LARYNGOMALACIA PROFILE IN CHILDREN AT CIPTO MANGUNKUSUMO HOSPITAL, JAKARTA 2005-2013

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OBJECTIVES : Laryngomalacia is the most common congenital malformation of the larynx which causes stridor in newborns and infants. The stridor is inspiratory and it is first noted at birth but sometimes may not develop until 2 weeks of age. It increases in severity during crying, nursing, agitation, excitement and is made worse with head flexion or supination. Other symptoms such as supraclavicular, intraclavicular, intercostal and abdominal retractions may be associated. Diagnosis of laryngomalacia is made by rigid or flexible laryngoscopy. There were three types of laryngomalacia that already known nowadays. While the three types are not mutually exclusive, each should be considered as a separate disease entity with a final common clinical presentation. Each type requires a specific approach to surgical repair. The aim of this study is to identify and appraise the evidence of laryngomalacia in our hospital.

METHODS : This is an observational study with cross-sectional methods from the archives data of ENT Department of Cipto Mangunkusumo Hospital, Jakarta from 2008-2011.

RESULTS : Boys are affected over twice as often as girls. Diagnosis of laryngomalacia is made by rigid or flexible laryngoscopy. Mostly stridor appears two months (4-6 weeks until 3 months) and getting better in two years. Type 1 laryngomalacia is the most common findings and only 5 patients need operative procedures by supraglottoplasty using hot knife.

CONCLUSIONS : Stridor is the most common symptoms for laryngomalacia in our hospital. Type 1 laryngomalacia is the most common findings and because of that the treatment can be done by conservatively.

MANAGEMENT OF LARYNGOMALACIA IN A PATIENT WITH MULTIPLE COMORBIDITIES

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BACKGROUND : Laryngomalacia is by far the commonest cause of congenital stridor, accounting for 60-70% of all cases. In the vast majority of patients, inspiratory stridor is the only symptom. The stridor is often intermittent, appearing only when the child is feeding or crying and may be much more pronounced during sleep, especially if the child lies on its back. The diagnosis can only be established for certain by direct observation of the appearance and movement of the laryngeal structures at endoscopy.

PURPOSE : To present the management of a laryngomalacia patient with multiple comorbidities.

CASES : One case of a 23-month-old girl with laryngomalacia managed with holistic treatment and surgical intervention.

MANAGEMENT : Patient was managed with holistic treatment and surgical intervention using the supraglottoplasty technique according to the classification of laryngomalacia.

CONCLUSION : In general, laryngomalacia will resolve within the first year of life, not acquiring any surgical intervention. However, there are cases where surgical intervention is indicated to prevent further complications. Supraglottoplasty is a commonly used technique in treating laryngomalacia. The technique can be modified based on the type of laryngomalacia. The decision of surgical intervention should be through careful consideration based on the abnormalities and prognostic factors of the patient.

KEYWORD : laryngomalacia, congenital laryngeal deformity, stridor, supraglottoplasty

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APPLICATION OF HOLMIUM YAG LASER IN PEDIATRIC LOWER AIRWAY

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OBJECTIVES : Holmium YAG laser is rather new laser in technology. Its advantages include fiberoptic delivery, less thermal damage, less tissue penetration, good function of bone ablation, explosive vaporization, and good hemostasis. It had been widely used in urologic surgery. However, there were few studies discussing about application in otolaryngologic procedures. The objective of this study is to present our experience in detail about clinical application of Holmium YAG laser in management of pediatric lower airway.

MATERIALS AND METHODS : With a retrospective review, pediatric patients diagnosed as subglottic stenosis or tracheal stenosis and treated with Holmium YAG laser in our department from July, 1998 to Dec., 2012 which were all enrolled in this study. Patient demographics, area of stenosis, numbers of endoscopic laser intervention, surgical outcomes, associated complications and tracheostomy intervention were all evaluated and summarized in this study.

RESULTS : There are 21 patients enrolled in this study. Among them, 15 patients were diagnosed as subglottic stenosis and 6 as tracheal stenosis. Thirty seven Holmium YAG laser procedures in total were performed during these periods, including ten primary interventions and 27 step or salvage interventions. Among subglottic stenosis group, 7 patients received Ho:YAG laser as primary intervention and all were symptom-free during follow-up. Additionally, 8 patients who were post tracheostomy status or post laryngotracheal reconstruction received laser surgeries as step or salvage operation and 6 of them were successful decannulation or symptoms free. As for tracheal stenosis, four out of six patients can be decannulated or symptom-free, including one primary laser intervention and 5 secondary interventions. Overall success rate was 81%. No significant operation related complication was found.

CONCLUSIONS : Management of pediatric Airway is complicated and challenging. The Ho:YAG laser can be a safe and effective step or a cure intervention used in lower pediatric airway.

CLINICAL OBSERVATIONS ON PROPRANOLOL USE IN PAEDIATRIC HEAD AND NECK HAEMANGIOMAS

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INTRODUCTION AND OBJECTIVE : Traditionally, treatment of head and neck haemangiomas in the paediatric population had been characterized as a challenging situation with multiple therapeutic interventions without consensus as to which one is the best and with risks of severe side effects.

Recent reports on the experience of propranolol use in the treatment of paediatric head and neck haemangiomas suggest favourable reasons for this use due to rapid improvement and its lack of severe side effects.

The objective of this study is to observe pre and post treatment response of paediatric head and neck haemangiomas to propranolol.

PATIENTS AND METHODS : We retrospectively reviewed all children with head and neck haemangiomas whom were treated with propranolol as the main therapeutic option in the paediatric airway service in Children's University Hospital since 2009. Pre-treatment protocol was used to minimize side-effects which included hypotension, bradycardia, hypoglycaemia and bronchoconstriction.

RESULTS : Eight children were included in this observation. We described the clinical characteristics of these patients and studies carried out prior to starting treatment with propranolol, pre-treatment endoscopic findings, clinical evolution and incidences during treatment.

CONCLUSION : Propranolol use in the treatment of head and haemangiomas appears to show a high degree of efficiency in improving clinical symptoms without the disadvantage of severe side effects as seen in major surgeries. Further studies are still required to confirm safety and results, but so far this drug appears to be an acceptable alternative in the treatment of head and neck haemangiomas.

FP 2.3

SUBGLOTTIC STENOSIS IN INFANTS AND CHILDREN TREATED WITH ENDOSCOPIC DILATATION AND MITOMYCIN C APPLICATION QUEEN ELIZABETH HOSPITAL SABAH, MALAYSIA : CASE SERIES

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OBJECTIVES : This study aimed to describe the epidemiology and to examine outcome of acquired subglottic stenosis in infants and children treated with endoscopic dilatation and mitomycin C application in Hospital Queen Elizabeth Sabah, Malaysia.

METHODS : A retrospective review and long term follow up was conducted in all infants and children diagnosed with subglottic stenosis between January 2003 till February 2013.

RESULTS : A total of 12 patients (6 males; 6 females) with median age of 18.3 months were identified. The majority had grade 3 stenosis (41.6 %) followed by grade 4 (33.3%) and 16.7% for each grade 1, 2. Nine patients had tracheostomy done, and from that, eight had severe subglottic stenosis of either grade 3 or 4. These eight patients underwent endoscopic dilatation and mitomycin C (0.1 to 0.2mg/ml) application with average frequency of 4 times. As of February 2013, 4 patients (include 1 patient with grade 4 stenosis) were successfully decannulated via this method. All patients had history of prolonged ventilation with mean of 22.8 days. Other risk factors include repeated intubation (83.3%); movement of endotracheal tube (58.3%); traumatic intubation (41.6%); respiratory infection with positive tracheal culture (66.7%); gastroesophageal reflux disease (25%). One child with grade 1 stenosis passed away due to severe pneumonia.

CONCLUSION : With limited facilities and expertise in Hospital Sabah, endoscopic dilatation and mitomycin C plays a major role in the treatment of subglottic stenosis.

FP 2.4

CENTRAL SLEEP APNEA IN CHILDREN WITH SLEEP DISORDERED BREATHING

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OBJECTIVES : In contrast to obstructive sleep apnea (OSA), central sleep apnea (CSA) has received lesser attention in the pediatric population. Pediatric CSA is more prevalent than expected and adversely impacts health. This study elucidates the major factors associated with central apnea index (CAI) in relatively healthy children. Exactly how CAI changes following adenotonsillectomy in children with CSA is examined as well.

METHODS : Retrospective analysis was performed in a tertiary referral medical center from May 2010 to July 2012. Children ranging from 2 to 18 years old were enrolled in this study. All participants completed history taking, otolaryngological examination, and overnight polysomnography. CSA was defined as having CAI \geq 1/hr. CAI and the prevalence rate of CSA were analyzed in children of different age groups, weight statuses, and adenotonsillar sizes. CAI changes in subjects receiving adenotonsillectomy were analyzed as well.

RESULTS : A total of 487 relatively healthy children with sleep disordered breathing (SDB) were included in the study. The prevalence of CSA was 13.3% (65/487). CAI was negatively correlated with age ($r=-0.32$, $p<0.001$). Obese children had a significantly lower CAI than that of non-obese ones ($0.20\pm0.36/\text{hr}$ vs $0.48\pm0.82/\text{h}$, $p<0.001$). Multiple linear regression analysis demonstrated a relationship among CAI, age, and obesity by "CAI = $0.883 - 0.055 \times \text{Age} - 0.22 \times (\text{Obesity})$ ". Among children receiving adenotonsillectomy, CAI decreased significantly postoperatively.

CONCLUSIONS : In relatively healthy children with SDB, younger ones have a significantly higher CAI than older ones. Additionally, obese children had a lower CAI than non-obese ones of the same age. Moreover, CAI decreases significantly following adenotonsillectomy. Future study is warranted to elucidate the complexities and treatment outcome of CSA in the pediatric population.

EFFECT OF TUALANG HONEY IN REDUCING POST TONSILLECTOMY PAIN IN PAEDIATRIC PATIENTS. AN OPEN LABELLED PROSPECTIVE CLINICAL TRIAL

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INTRODUCTION : Poor management of pain after tonsillectomy could lead to significant health problems to patient and family. Honey has been shown to have positive effects in reducing post operative pain.

OBJECTIVES : The aim of this study was to evaluate the effectiveness of Tualang honey in reducing post tonsillectomy pain.

METHODOLOGY : This open labeled prospective clinical trial included patients who were randomized into two groups. The treatment group received 2-3 mls topical Tualang honey intraoperatively followed by oral consumption of 4 mls of Tualang honey three times daily for seven days together with intravenous sultamicillin at 25mg/kg three times daily for day 1-2 followed by oral Sultamicillin twice daily for five days. The control group only received intravenous Sultamicillin at 25mg/kg for two days followed by oral Sultamicillin twice daily for five days. Patients were assessed for pain score by Visual Analogue Scale (VAS), frequency of awakening at night due to pain, and additional use of analgesia from day 1 to day 7 post operatively.

RESULT : There was no significant difference in post tonsillectomy pain between Tualang-antibiotic group and antibiotic only group. Post operative throat pain was relieved slightly faster in Tualang-antibiotic group. At day 7 post operatively, most patients in Tualang honey group experienced no pain if compared to antibiotic only group.

CONCLUSION : Tualang honey did not show any significant effect in reducing post tonsillectomy pain. However it is easy to use topically, safe to consume orally and available at low cost locally.

AN UNUSUAL CAUSE OF ACUTE INTRA-OPERATIVE AIRWAY OBSTRUCTION : A CASE REPORT

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Acute intra-operative airway obstruction is a challenging condition and has potentially lethal outcome if not detected and treated on time.

We present a case report of 16 months old boy with Wiskott-Aldrich Syndrome who underwent elective Hickman Line insertion and esophagogastroscopy. No pre- and intra-operative respiratory problem encountered during the duration of the above procedures. At the anesthesia reversal, the anesthetist noted blood stained secretion on the endotracheal tube. There was also difficulty maintaining oxygen saturation and some resistance bagging the patient. The endotracheal tube was removed and changed with the same size ETT but ventilation did not improved. Flexible bronchoscopy through the ETT was performed and noted "fleshy mass" proximal to the tip of ETT. Intra-operative referral to ENT was made. Emergency rigid bronchoscopy was performed and successfully removed a massive obstructive material which molded to the shape of the tracheobronchial tree. Patient remained intubated in intensive care unit for three days. During his ICU stay, clotted materials were further removed during bedside flexible bronchoscopy and bronchoalveolar lavage. Patient's parameters remained stable. He was successfully extubated on his fourth day in CICU.

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EPIDEMIOLOGY OF MIDDLE EAR AND EXTERNAL EAR CHOLESTEATOMA IN TAIWAN

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OBJECTIVE : Cholesteatoma is a common disease in patients of any age, which mostly involved middle ear, but relatively rare in external ear canal. It is assumed that the prevalence and recurrence of middle ear cholesteatoma should decline. However, the epidemiologic study of cholesteatoma is rare and there is still limited study. The purpose of this study was to investigate the nation-wide epidemiology of ear cholesteatoma in Taiwan.

METHODS : This study is designed to retrieve the data of cholesteatoma cases from National Health Insurance claims database between years 2000 to 2010. Claims data are retrieved for patients who received surgery with a diagnosis of middle ear cholesteatoma, external ear cholesteatoma, and cholesteatoma unspecified (ICD-9-CM codes: 380.21, 383.32, 385.30~385.35, 381.61). The prevalence and recurrence will be described comparing sites, age, and gender.

RESULT : The prevalence of cholesteatoma was higher in female group. The incidence of middle ear cholesteatoma declined with years, while the incidence of external ear cholesteatoma increased. Among the different age groups, the same declined trend was more distinct in adult group. There was a distinct dip in 2003 of all groups and it was the year that SARS broke out in Taiwan. The average recurrence rate was higher in younger age, male population, and tympanomastoid group.

CONCLUSION : As the advancement of medical care and nationwide health insurance system, early diagnosis and adequate treatment of otitis media become possible, therefore cholesteatoma is decreasing, esp. tympanomastoid cholesteatoma. The external ear cholesteatoma was much less, but increased at the same period. Although, the higher recurrence rate in young children and increased trend of incidence of external ear cholesteatoma remain to be solved. Especially, cholesteatoma in children is considered more aggressive and challenging in treatment, with higher recurrence and residual disease. These children will need more carefully treatment and regular follow-up in the future.

SPEECH READY LONG TERM TUBE FREE TRACHEOSTOMY - AN ALTERNATIVE MANAGEMENT OF SEVERE LIFE-THREATENING OBSTRUCTIVE SLEEP APNOEA

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We report a case of a 69 year old lady with morbid obesity, obstructive sleep apnoea (OSA), hypertension, heart failure and cor pulmonale, who was admitted and intubated for severe type 2 respiratory failure, after failed bilevel positive airway pressure (BIPAP) treatment. She had an episode of failed extubation once and subsequently speech ready long term tube free tracheostomy was performed on day 8 of ventilation. The ventilator and tracheostomy tube was weaned off on day 6 post -operation and oxygen was weaned off on day 13 post-operation. She remains tube free since. At 6 months post-operatively, she no longer require finger compression on the stoma for speech. She is currently 1 year 3 months post operation. She has good hands-free speech and is independent in managing her activities of daily living. In OSA patients with severe life-threatening cardiopulmonary complications, unfit for long surgeries, failed positive airway pressure treatment and other surgical interventions, tracheostomy remains the most effective treatment option. Modified techniques such as long term tube free speech ready tracheostomy is effective and suitable for such patients.

OUTCOMES OF PAROTID GLAND SURGERY : 3 YEARS RETROSPECTIVE STUDY

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OBJECTIVE : To study the Outcomes of Parotid Gland Surgery.

DESIGN : Retrospective study.

SETTING : Taiping Hospital, Perak, Malaysia

PATIENTS : 32 patients (23 male patients and 9 female patients) underwent parotid gland surgery from January 2010 until December 2012 (3 years study). We divided the group according to their pathological diseases which are pleomorphic adenoma (13 patients), Warthin's tumour (10 patients), parotid carcinoma (5 patients), parotid cysts (3 patients) and lipoma of parotid gland (1 patient). 26 patients (81.25%) underwent superficial parotidectomy and 6 patients (18.75%) underwent total parotidectomy. The surgeon used nerve stimulator in all surgeries.

MAIN OUTCOME MEASURE : Complications of parotidectomy with nerve stimulator for various groups of parotid diseases.

RESULTS : Pleomorphic adenoma are the commonest group involved in both intra-operative and post-operative complications of parotidectomy which counted 2.5% and 3.1% respectively. The commonest complication of parotid gland surgery is hypoesthesia of greater auricular nerve counted 9.38%. 1 patient had facial paresis and 1 patient had permanent facial paralysis due to transaction of zygomatico-temporal branch of facial nerve. Both counted as 3.12%.

CONCLUSION : The commonest complication involved in all groups is hypoesthesia of greater auricular nerve which may be caused by retraction and manipulation of nerve during surgery. It also can be the reason for temporary facial nerve paresis. All nerve paresis resolved well. None of the patients had haemorrhage or haematoma of the operation site as radivec drain was insertion. Overall, there is no serious complication in this study except for transaction of temporozygomatic branch of facial nerve in 1 patient who had recurrent pleomorphic adenoma. The nerve stimulator was useful in operation but it is not a specific tool in determining the involvement of facial nerve. Conclusively, understanding the anatomy of parotid gland and its pathology plays big role in reducing outcome and complication of the surgery.

KEYWORDS : parotid gland surgery, salivary gland, complication of parotidectomy.

AN AUDIT OF BALLOON SINUPLASTY USING SNOT-20 IN AMPANG PUTERI SPECIALIST HOSPITAL FROM 2010 TO 2012. A PRELIMINARY REPORT

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Balloon sinuplasty (BS) is a well known procedure for sinusitis and have its own advantages. We performed a pre and postoperative survey amongst patient underwent BS in our hospital from 2010 to 2012 using SNOT-20 test.

METHODS : Seventy patients were included in the survey and most of the survey was done either from direct questionnaires before the surgery and post operatively during the follow-up or via telephone conversation. The earliest post operative survey was conducted 2 months post operative and latest after 2 year of surgery. The data were then analyzed by using student T test.

RESULTS : All patient have experience some relieve of the symptoms post operatively. Most significant symptoms were on relieved of headache, dizziness, improvement of sleeping and even running nose. However over a long period of time the relieve of symptoms have some reduction even though the results is not significant.

CONCLUSION : BS has significantly reduced sinusitis symptoms however in a longer period there is a recurrence of symptoms and this needs further evaluation. Patient selection in terms of severity of the disease, symptoms and expectation is as important to prevent recurrence of the disease

A PROSPECTIVE AUDIT OF TOTAL INTRAVENOUS ANESTHESIA IN NASAL AND EAR SURGERIES

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INTRODUCTION : Intraoperative bleeding during nasal and ear surgeries leads to increase the incidence of complications.

Hypotensive anesthesia is an anesthetic technique used to minimize intraoperative blood loss. Consequently reduce operative time. Also enhancing visualization by a drier and clear operative field improving quality of surgery.

METHODS: We conducted a prospective study for 98 patients undergoing nasal (FESS & septoplasty) and ear surgeries (tympanoplasty & mastoidectomy) using TIVA in AKH and study the amount of bleeding in the operative field, bleeding score, Also we monitored blood pressure and heart rate pre, peri and post-operative. Also the level of patient awareness during anesthesia has been recorded by the (BIS) monitoring .

RESULTS : Of 98 patients, 73 underwent Nasal Surgery and 25 ear surgery respectively. There were 81 males, 17 females. Mean Blood loss was observed to be 29.3 ± 41.8 .

Significant association was observed between bleeding score and systolic BP. Mean systolic BP was significantly higher in patients who had bleeding score 3 in comparison to those patients who had bleeding scores 1 & 2.

However, it was not statistically significant. There was no significant association or correlation observed between BP, Heart rate and Blood loss.

CONCLUSION : TIVA is an excellent anesthetic technique to control blood pressure and to minimize blood loss and to provide a good surgical field in nasal and ear surgeries. This type of anesthesia has proven to be a valid tool for the surgeons.

RAPID EYE MOVEMENT-DOMINANT SLEEP-DISORDERED BREATHING IN CHILDREN

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OBJECTIVES : Criterion for rapid eye movement (REM)-dominant sleep-disordered breathing (SDB) in children are controversial. The aim of this study was to delineate the features of REM or non-rapid eye movement (NREM) respiratory events in children with SDB under different age, gender, adiposity, and SDB severity.

METHODS : In this cross-sectional study, we enrolled 499 patients aged 2-18 years referred for a full-night polysomnography under suspicion of SDB. Demographic data, including symptoms, age, gender, adenotonsillar size, and body mass index were recorded. Apnea-hypopnea index (AHI) from REM or NREM sleep was analyzed. Polysomnographic features were defined as follows: definition 1# REM-related SDB: REM-AHI/NREM-AHI >2; definition 2# REM-AHI >NREM-AHI or REM-AHI <NREM-AHI. Children among different age groups, gender, weight status, and OSA severity were compared.

RESULTS : According to definition 1#, the prevalence of REM-related SDB was 52% in male vs. 50% in female, and 56% in obese vs. 50% in non-obese patients. This prevalence was significantly higher in younger children (age <7) than in older ones (age >7) (58% vs. 44%, p=0.004). Children with more severe form of OSA had significantly higher prevalence (AHI >5: 62%, 1<AHI<5: 54%, and AHI <1: 37%, p <0.001). The prevalence of REM-AHI>NREM-AHI (definition #2) was also significantly higher in younger children (78% vs. 64%, p=0.01) and more severe OSA (80%, 76%, and 58%, respectively, p <0.001).

CONCLUSIONS : An AHI predominantly in REM sleep was present in young children with moderate-to-severe OSA.

KEYWORDS : Child; Polysomnography; Sleep Apnea Syndromes; Sleep, REM

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FP 4.1

CLINICAL APPLICATION OF DIGITAL VIDEO-OTOSCOPIC CAMERA IN DIAGNOSIS OF OTITIS MEDIA IN CHILDREN

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OBJECTIVES : A correct diagnosis of pediatric otitis media is imperative for instituting an appropriate treatment, especially for trainee or pediatrics. The aim of this study was to evaluate the clinical application of a newly designed digital otoscopic camera (DOC) in the diagnosis of otitis media in children by comparing the diagnostic efficacies with conventional optical otoscopy, tympanometry and audiometry.

METHODS : We randomly collected 1504 ears from the children (below 18-year-old) who visited our special clinic in a tertiary medical referral center between 2012/07/23-2012/12/31. Those with inadequate photo quality (80 ears), obstructed (102 ears) and those operated ears with ventilation tube inserted (311 ears) were excluded. Totally 860 ears were included for the assessment of conventional otoscope and DOC simultaneously. Totally 345 ears with tympanogram within one week were further evaluated. The agreement between different methods was calculated with kappa co-efficiency for its significance by SPSS 20.0.

RESULT : Among 860 ears assessed, the diagnosis of conventional otoscope and DOC yields moderate agreement ($\kappa=0.596$). Those 345 ears with audiometry or tympanogram were further evaluated. The agreement between each methods all yields substantial agreement. We also assess the efficiency of detecting middle ear effusion between conventional otoscope, DOC, and tympanogram, which yields at least substantial agreement.

CONCLUSION : DOC is as efficient as the conventional otoscope in diagnosing otitis media in children. It provides more detailed information, sufficient time. These not only give advantage to telemedicine and training medical students, but also provide better communication with parents. Consequently, DOC is a useful tool for the diagnosis of pediatric otologic diseases.

FP 4.2

OTITIS MEDIA WITH EFFUSION IN CHILDREN : REVIEW OF SURGICAL INTERVENTION IN HOSPITAL SULTANAH BAHYIAH, MALAYSIA

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Otitis media with effusion (OME) remains the commonest cause of childhood hearing loss. Many patients would be subjected to ventilation tube insertions and/or adenoidectomies following failure of medical therapy or watchful waiting. None of the treatments can be proven to be really effective. We intend to study the cohort of children underwent these procedures in our centre, by looking into the pre-operative patient profile and post-operative outcome.

This is a retrospective review of all children aged 12 years and below with otitis media with effusion (OME), underwent myringotomy with or without grommet insertions, with or without adenoidectomies in Hospital Sultanah Bahiyah, Alor Setar, from April 2009 to December 2012. We include all patients with cleft palate and dysmorphism, excluding those with concomitant ear pathology such as cholesteatoma or tympanic membrane perforation.

A total of 175 patients were included in our study. Gender distribution showed male preponderance. Majority of them presented with subjective hearing impairment followed by otalgia, with otoscopic findings at presentation largely showing dull tympanic membrane. Pre-operative hearing test showed conductive hearing loss with abnormal tympanogram curve (type B or C). A small proportion of patients required adenoidectomy and/or second grommet procedures. Majority of the children showed subjective improvement of hearing post-intervention.

Children with OME mostly present with hearing impairment, evident on clinical examination and hearing tests. Insertion of grommet is effective in restoring hearing thresholds. Adenoidectomy can be justified in persistent OME, the combination with grommets is broadly beneficial to terms of hearing and respiratory-related symptoms. Myringotomy procedure provides a definitive diagnostic and therapeutic value.

CLEFT LIP AND CLEFT PALATE: AN AUDIOLOGICAL EVALUATION IN THE MALAYSIAN POPULATION

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OBJECTIVE : To study the prevalence, degree and distribution of hearing impairment in the patients with cleft lip and palate in the Malaysia population, and to compare with that of previous similar studies from other Asian and Western countries.

DESIGN : Prospective observational study.

METHODOLOGY : All patients with cleft lip and palate who presented to the combined cleft clinic at University Malaya Medical Centre (UMMC) were reviewed. The patients' hearing status was determined based on the results derived from tympanometry, pure tone audiometry & auditory brainstem response (ABR). These results were analyzed, looking for potential relationship with the patients' age, gender, ethnicity and types of cleft.

RESULTS : The patients' age ranged from 1-25 years with a median of 4 years. Female to male ratio was 1:1.06. 30.3% had unilateral cleft lip and palate (UCLP), 30.3% had bilateral cleft lip and palate (BCLP), 24.2% had isolated cleft palate (ICP) and 15.2% with isolated cleft lip (ICL) only. Majority of the patients (69.7%) had normal otoscopic finding. 72% passed the hearing tests. There was no significant relationship between patients' gender or ethnicity and hearing status. The types of cleft pathology were found to significantly influence the outcome of the pure tone audiometry and ABR screening results. There was no significant difference between the repaired/unrepaired cleft groups and their hearing status.

CONCLUSION : The prevalence of hearing impairment among our cleft patients was significantly lower when compared to the western countries, but almost similar with other Asian population. Racial factors could possibly be accountable for this disparity. The patients should be screened regularly for hearing impairment even though surgical repair of the cleft palate has already been undertaken.

MRI FINDINGS IN CHILDREN WITH TINNITUS

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OBJECTIVES : Tinnitus in adults is generally investigated by MRI to rule out the diagnosis of acoustic neuroma. The role of MRI in the investigation of children with tinnitus is unclear, and we therefore undertook a study to assess the value of MRI in the investigation of tinnitus in children.

METHODS : Retrospective study of children under the age of 18 years who underwent MRI for the investigation of tinnitus over a 10-year period.

RESULTS : Sixty-five patients were identified, but there were only 34 who had also undergone audiologic assessment. Among the 25 patients with normal audiology, MRI abnormalities were present in 9, but these were all thought to be non-specific. Nine patients had abnormal audiograms and the MRI was abnormal in 4 of these cases, which included three children who were found to have multiple sclerosis.

CONCLUSIONS : MRI would appear to be mandatory in the investigation of tinnitus in children who are found to have abnormal audiology, particularly to rule out the diagnosis of multiple sclerosis. While our study does not support the use of MRI in children with normal audiology, the numbers in our series are too small for a conclusive recommendation.

KEYWORDS : MRI, tinnitus, children.

THE OUTCOME OF CHILDREN WITH INNER EAR ABNORMALITIES AFTER COCHLEAR IMPLANTATION

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INTRODUCTION : Cochlear implantation has had great success in improving the hearing abilities in children with hearing loss including those with inner ear malformations.

OBJECTIVES : To review the outcome in children with inner ear malformations after cochlear implantation in KK Hospital, Singapore.

METHODS : Children with abnormal cochleovestibular anatomy who underwent cochlear implantation from year 2000 to 2013 were evaluated. Data regarding type of inner ear abnormality, age at implantation, surgical findings, speech pre and post implant and duration of follow-up was collected.

RESULTS : There were 59 patients (69 cochlear implants) . Sixteen had abnormal CT scans. Nine were females and seven males. Five had incomplete partition type 2 and enlarged vestibular aqueducts. Three had incomplete partition type 1 (IP-1). Three had narrowed internal auditory canal.

Intra-operatively, eleven patients had peri-lymph gusher, which could be controlled with a fascia graft. Four patients stayed more than one day post-operation because of fever. None had major complications such as facial nerve palsy or meningitis.

Four patients (A-D) had poor audiological performance post-implant. Patient A had IP-1 on CT scan but Magnetic Resonance Imaging (MRI) showed possible absent cochlear nerve. Patient B and C had narrowed cochlear nerve canals on CT scan but only patient B had narrowed internal auditory canal on MRI. Patient D had cochlear dysplasia, mild incomplete partition of middle and apical turns and absent modiolus on CT scan. His post-op X-Ray also demonstrated folding of electrodes.

CONCLUSION : Most patients achieved improvement in speech and hearing abilities post implant. Those with poor results could be attributed to the lack of stimulation, absent cochlear nerve or abnormal placement of electrodes. Children with abnormal inner ear anatomy should continue to receive cochlear implantation as their results are similar to children with normal cochlear.

HEARING IMPAIRMENT IN CHILDREN WITH NASOPHARYNGEAL CARCINOMA POST CISPLATIN-BASED CHEMOTHERAPY AND CHEMORADIATION

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BACKGROUND : Carcinoma of the nasopharynx (NPC) accounts for less than 1% of all childhood cancers. Children aged between 10-19 years are the most common age-group affected. Ear-related issues may be manifestations of the disease itself or can arise from treatment of NPC. Hearing impairment caused by ototoxicity starts at high frequencies and can be progressive, affecting frequencies needed to understand speech.

PURPOSE : To increase awareness in the management of NPC concerning hearing impairment related to the disease and/or therapy.

CASES : Two cases of pediatric NPC is presented in this paper. Both cases experience impairment in the outer hair cells of the cochlea observed through audiometric and distortion-product otoacoustic emission (DPOAE) examinations.

MANAGEMENT : Two cases of pediatric NPC is reported, one managed with cisplatin-based chemotherapy and the second with chemoradiation. Hearing evaluation was done using tympanometry, high frequency audiometry and DPOAE.

CONCLUSION : Childhood hearing loss can influence language learning and also cognitive development resulting in educational, behavioral and social activities. Early detection of ototoxic hearing loss provides an opportunity to further evaluate therapy and educate the patient and family regarding hearing loss, its effects and management.

KEYWORD : hearing impairment, NPC, chemotherapy, radiotherapy, children

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TRANS-ORAL ENDOSCOPIC ADENOIDECTOMY USING BIPOLAR RADIOFREQUENCY SUCTION COAGULATOR

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Adenoidectomy with or without tonsillectomy is one of the most common surgical operations in the pediatric otolaryngology.

Traditionally, Adenoidectomy was done blindly with digital palpation to assess the adenoid size and using adenoid curette for removal of adenoid. The operation described as operation in the dark.

Occasionally laryngeal or dental mirror used for partial and indirect visualization of adenoid bed for assessment to avoid residual adenoid and avoid injury to adjacent structures.

In the last 2 decades, with the introduction of nasal endoscopic surgery, a number of authors have described visualization of adenoid during surgery using a trans-oral mirror, trans-oral endoscope or trans-nasal endoscope.

Also different tools other than adenoid curette have been introduced for removal of the adenoid as monopolar and bipolar suction coagulation, microdebrider and radiofrequency.

All these different ways of visualization and different methods of removal of adenoid, all aimed to improve the quality of surgery and to minimize complications by insuring complete removal of the adenoid and avoiding over removal and injury to pharyngeal muscles with consequent scarring and stenosis, also avoiding injury to eustachian tube.

Over the past 2 years we shifted from using laryngeal mirror to conduct a trans-oral endoscopic adenoidectomy by using a 900 (4mm) endoscope suspended with a multi-joint suspension and connected to a camera and monitor. And also we shifted from using a monopolar suction coagulator to bipolar radiofrequency suction coagulator.

We believe that blind adenoidectomy should be a past, and full visualization of the adenoid during surgery is a must.

We found that using a trans-oral 900 endoscope is safe and effective by giving better view of the adenoid without encroachment on the surgical field.

Also the bipolar radiofrequency suction coagulation gives a bloodless field with less collateral heat.

PEDIATRIC TRACHEOTOMY—RELATIONSHIP BETWEEN INDICATION AND HOSPITALIZATION

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OBJECTIVES : This study retrospectively investigated children who had received tracheotomies in a tertiary medical center and assessed outcomes of time to weaning, duration of post-operation hospital stay and decannulation.

METHODS : A consecutive series of patients of younger than 18-year-old who receive tracheotomies in a tertiary referral Children's Hospital over 14 years(1997~2011) were retrospectively reviewed. Age, gender, indications, pre-operative status (oxygen-demand, number of repeated intubations) and post-operative status (duration of weaning, length of hospital stay following operation, mortality) were analyzed.

RESULTS : The analysis concerned 115 of 128 tracheostomized children with complete hospital records. Indications for tracheotomy included congenital or craniofacial deficits(n=17), upper airway obstruction(n=30), neurological disorder(n=45), prolonged ventilator support(n=16), and trauma(n=7). The overall weaning rate was 58.2%(n=67), and the mean weaning duration was 12.4 days. Patients with prolonged ventilator support were weaned for longer and had a lower rate of weaning (22.5 days, 25%, p<0.05). The mean duration of the hospital stay among the 101 children(87.8%) who were eventually discharged was 101.4 days. Those with congenital or craniofacial deficits had the longest hospital stays (mean 148.1 days, p=0.05) and the highest frequency of intubation before the tracheotomy than others (average=1.7 times, 0~8). Among 54 survivors followed at the end of this study, only 20.4%(11/54) were decannulated (mean 11.97 months). Eleven patients(9.57%) eventually died, but none of them died of tracheotomy-related cause.

CONCLUSIONS : The rate and duration of weaning in tracheostomized children vary between indications. Most children were finally discharged from the hospital, but the rates of successful weaning and decannulation were low. Intensive respiratory care and comprehensive tracheotomy care remain important despite the safety of this procedure. Decannulation should be carried out as early as possible.

PREVALENCE OF LARYNGOPHARYNGEAL REFLUX IN INFANT WITH PRIMARY LARYNGOMALACIA AT CIPTOMANGUNKUSUMO HOSPITAL JAKARTA, INDONESIA

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INTRODUCTION : Primary laryngomalacia is the most frequent cause of stridor in children. A recent study showed Laryngopharyngeal reflux (LPR) may contribute to increasing edema and altered sensorimotor integrative function of larynx in laryngomalacia. The goal of this study was to evaluate the prevalence of LPR in infants with laryngomalacia. and to evaluate characteristics and clinical signs from flexible laryngoscopy videos.

STUDY DESIGN : This is an observational study with cross sectional methods. Data was collected by chart review and flexible laryngoscopy video of eighty laryngomalacia infants, in tertiary-care hospital from May 2008 to May 2012.

METHODS : Eighty medical records and flexible laryngoscopy videos of laryngomalacia infants were collected. We defined LPR if at least three out of five clinical signs were discovered such as lingual tonsil hypertrophy, postglottic edema and/or erythema, ventricular fold and vocal fold edema and/or erythema.

RESULT : We found that the prevalence of LPR was 90%. The characteristic of the primary laryngomalacia infants are more common in male infants (61.3%), in the 0-3 months age group (63.8%), in aterm group (85%) and in normal birth weight group (80%). Neurologic disease was the most common co-morbidity (25%). Stridor was the most common clinical symptom (97.5%). Postglottic edema/erythema was the most common clinical signs of LPR. Type 1 laryngomalacia was the most common finding.

There were no significant differences between the characteristics of gender, age, maturity status, birth weight and co-morbidities with the clinical symptoms. There were significant relationships from three of five clinical findings with LPR, such as arytenoids edema/erythema($p<0.001$), ventricular fold edema and vocal fold edema($p<0.001$).

DISCUSSION : These data suggest almost all infants with laryngomalacia have acid exposure to larynx. We can use flexible laryngoscopy to diagnose laryngomalacia and its co-morbidities especially LPR and for evaluation treatment adequacy.

KEY WORDS : Infant, laryngomalacia, laryngopharyngeal reflux, stridor.

AN UNCOMMON CAUSE OF STIDOR IN NEWBORN

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OBJECTIVES : Stridor in newborn can be caused by many other conditions, one is caused by congenital lesion. Ectopic gastric mucosa (EGM) of the hypopharynx, thyroglossal lingual duct cyst, and buccal teratoma with upper airway obstruction is an uncommon etiology of stridor in newborn infants with symptoms resembling laryngomalacia. EGM of the hypopharynx and buccal teratoma are extremely rare. Our literature review reveals that this is the 10th reported case ectopic gastric mucosa of the hypopharynx in infant. This study is aimed to evaluate the surgical outcomes of the treatment and to explore the appropriate time point of surgery

METHODS : All the patients received fiberoptic videobronchoscopic examination in order to prove the diagnosis. Pre-operative and post-operative six symptom items were both recorded for comparison of the surgical outcomes. The age of diagnosis, gender, operation, body weight at surgery, co-morbidities, days of postoperative endotracheal intubation, ICU stays and admission days were all recorded.

RESULTS : Three cases of congenital mass were diagnosed by fiberoptic videobrochoscopy at our department. All cases were diagnosed between 21-39 days-old. Stridor was the most common pre-operative symptom (100%). Additionally, all newborns were already stays in NICU before consulted. Feeding choking was the most common post-operative one and the use of OGT still needed. Failure to thrive got worse as age increased before the operation. All of patients had good or excellent improvement of symptoms after surgery. There was neither recurrence nor surgical complication in our evaluation.

CONCLUSION : Surgical management with or without tracheostomy is the treatment of choice, and trans oral excision approach or laryngoscopic procedures have good results for these cases.

RADIOGRAPHIC ANALYSIS OF THE CERVICAL LORDOSIS IN NORMAL CHILDREN

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The loss of cervical lordosis has been reported to be a useful finding on lateral neck radiograph in patients with oesophageal foreign bodies and deep neck infections. Due to the lack of a widely accepted measurement technique, and paucity of data in normal subjects, radiologists arbitrarily decide whether the cervical lordosis is lost. The aim of this study was to attempt to objectively define the cervical lordosis in normal children.

METHODS : 596 children underwent tonsillectomy and/or adenoidectomy in our department in 2012. 294 had lateral neck radiographs done to evaluate their adenoids preoperatively and were otherwise healthy children. The cervical lordosis was measured using the posterior tangent method. In this method, the lordosis is defined by the angle subtended by the posterior wall of the body of C2 and C7.

RESULTS : 36 children were excluded from our final analysis (C7 was not visualized in 21 children, 15 children had a kyphosis). In the remaining 258 children, the mean age was 5.6 years (range 0.2 to 13.7). 198 were male and 96 were female. The mean lordosis was 23.8° (SD 14.3) with 95% confidence interval -4.2° to 51.8°. There was a significant difference between the means of children less than 5 years and those more than 10 years (24.7 vs 15.8, $p=0.0055$), as well as between those aged 5 to 10 years and those more than 10 years (22.3 vs 15.8, $p=0.0367$). There was no significant difference between the means of each gender.

CONCLUSION : In our study, the established reference range of cervical lordosis in children was wide (-4.2° to 51.8°). This can be attributed to the difficulty in the positioning of children while obtaining their lateral neck radiograph. Therefore, when evaluating patients with the above-mentioned diagnosis, this radiological finding may be more applicable in older children and adults than in younger ones.

JUVENILE RECURRENT PAROTITIS, THE KK WOMEN'S AND CHILDREN'S HOSPITAL EXPERIENCE

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INTRODUCTION : Juvenile recurrent parotitis (JRP) is a non-obstructive, non-suppurative parotid inflammation seen in children.

METHODS : Between 2012 and 2013, 5 cases of JRP were treated in the department of Otolaryngology, KK Women's and Children's Hospital. Demographic, clinical, procedure-related data and complications were collected. Our indication for endoscopic intervention was at least 2 episodes of parotid inflammation within a 1 year period.

RESULTS : The mean age of the patients was 6 years (range 4 to 15 years), of which, 2 were male and 3 were female. The average age of onset was 5 years (range 2 to 10 years). Mean frequency of attacks was 8 episodes/year (range 3 episodes/year to 12 episodes/year). 3 patients had unilateral symptoms, and 2 had bilateral symptoms. Ultrasound was done for all patients and showed the typical hypoechoic lesions in 3 patients. Autoimmune screen was done for 3 patients and was negative in all. 1 patient required incision and drainage of a parotid abscess. 2 patients underwent sialendoscopy of the dominant affected gland with ductal dilatation, lavage and instillation of hydrocortisone. Findings of avascular ductal walls, multiple strictures, and debris within the ductal system, were pathognomonic of JRP. There were no complications after the procedures, and no new episodes of parotid swelling were reported at the last follow up.

CONCLUSION : JRP is a rare salivary gland disease seen in children. However, the recurrent inflammation has significant repercussions resulting from multiple hospital admissions and loss of school days. Until recently, the traditional approach was based on management of the acute attacks, and parotidectomy for severe cases. Sialendoscopy provides a minimally invasive therapeutic management of this condition. Our early experience concurs with current literature in which sialendoscopy has been shown to be a safe, effective treatment for JRP.

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EXTRACRANIAL SINONASAL TRIGEMINAL SCHWANNOMA : REPORT OF 3 CASES REMOVED VIA ENDONASAL ENDOSCOPIC OR ASSISTED CRANIOFACIAL RESECTION

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Schwannomas are rare benign tumours, synonymous with neurilemmomas. It usually arises from intracranial Schwann cells, but can also arise from nerve sheaths of any part of the body, extracranially. It is a slow growing tumour with a small likelihood of malignant transformation. Intracranial trigeminal schwannomas account for only 0.2% of all intracranial tumours, whereas extracranial trigeminal schwannomas have been reported to account for 7% of all schwannomas in head and neck region. Maxillary and ophthalmic branches are the most common trigeminal nerve branches involved. Clinical presentation includes unilateral nasal obstruction, facial pain and headache. The site and extension of the mass will determine the surgical approach. Surgical options reported in literatures describe mainly open approaches. However, open methods have high morbidity and facial disfigurement. We report three cases of trigeminal schwannoma removal via endonasal endoscopic sinus surgery.

GUIDELINE FOR THE DIAGNOSIS AND MANAGEMENT OF CHRONIC RHINOSINUSITIS, A LITERATURE REVIEW

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Rhino sinusitis with acute or chronic is a set of conditions that takes a significant time of many outpatient clinics. Additionally, the chronic form of rhino sinusitis can be an enormously difficult problem to manage, with under-treatment and over-treatment of patients both equally possible to lead to poor outcomes.

Chronic Rhinosinusitis (CRS) has a multivariant causation and is not simply a bacterial disease. Therefore the lack of one etiology makes the diagnosis of CRS and selection of treatment is complex.

Chronic rhino sinusitis has also been shown to have a much greater impact on overall quality of life than previously recognized and is indeed a potentially debilitating disorder.

Due to the variability in symptoms presentation and practitioner preference, standardization has been difficult concerning treatment planning. The establishment of clinical practice guidelines is important to guide practitioners in the management of this complicated disorder. The presence of evidence based guidelines will aid in developing successful clinical trials for CRS.

METHODS AND MATERIALS: this prospective study was developed in the ENT department of Al Khor hospital in Qatar, and carried out by Otolaryngologists who are trained in developing, reviewing clinical literature using the standards set by the evidence based practice committee in the Otolaryngology department in HMC.

All relevant published articles related to chronic rhino sinusitis were reviewed in the preparation of the guidelines .

It is also ensured that the guidelines are consistent with best available scientific published articles related to the topic that will be systemically collected and classified for review.

Recommendations from this research will help improve the diagnosis of chronic rhino sinusitis, reduce inappropriate antibiotic use, use of radiographic imaging and possibly improve the cost effectiveness of the management of this condition in Qatar and elsewhere with similar practice settings.

WOAKES SYNDROME OF UNILATERAL NASAL POLYP

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BACKGROUND : Nasal polyps in children are an extremely rare condition. Extensive nasal polyp growth in the paranasal sinuses can lead to bone erosion of the sinus walls and cause facial disfigurement due to continuous pressure or chronic inflammation. This phenomenon is called Woakes syndrome. This syndrome consist of several symptoms include the destruction of ethmoid sinus that cause broadening of the bridge of the nose, frontal sinus aplasia, bronkiektasis and dyscrinia. Etiopathogenesis of this syndrome is still unknown.

PURPOSE : to remind otolaryngologist that Woakes syndrome may occur in children with nasal polyps.

Case : One case of 16-year-old boy with deformity of the left nose since 4 months ago. Patient complained of nasal obstruction and frequent episodes of rhinorrhea. Biopsy results show chronic nasopharyngitis and chronic rhinitis. **Management:** Nasoendoscopy use to evaluate the polypoid mass and the anatomy structures and later on used for extirpation of the polypoid mass. Pathology anatomy results taken from the nasoendoscopy approach was edematous polyposis. **Summary** After the polyp has been extirpated, the size of the nose is smaller. Patient does no longer complain of nasal obstruction and frequent rhinorrhea. Patient is then planned for reconstruction surgery for the importance of aesthetic.

CONCLUSION : Certain entity of nasal polyps in children may related to Woakes syndrome. Further elaboration in histopathology related to molecular findings of Woakes syndrome is needed to have complete understanding of nasal polyps.

KEYWORD : Woakes Syndrome, Nasal Polyps, Endoscopic Surgery

REVIEW OF DAYCARE TONSILLECTOMIES AT A TERTIARY MEDICAL CENTER

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INTRODUCTION : Daycare tonsillectomy has been performed for many years worldwide, however not many centres in Malaysia practice this. As one of the pioneers in daycare tonsillectomy centre in Malaysia our hospital, Hospital Raja Permaisuri Bainun, Ipoh have been providing this service since 2006.

OBJECTIVE : To evaluate daycare tonsillectomies in regional hospital since commencement from 2006, to determine complications of daycare tonsillectomy (mortality and morbidity). And to provide an overview of the additional benefits of a daycare procedure as compared to conventional admission .

METHODS : A retrospective data collection of daycare tonsillectomy and adenoidectomy from year 2006 till the middle of 2011. The inclusion criteria will be based upon the daycare operative list from the ENT department.

RESULTS : There are a total of 431 patients enlisted for daycare tonsillectomy, 192 of them belonging to the paediatric age group below 12), adolescent 74 patients, and 165 adults. Male to female ration is 1:1. Racial ratio: Malay 77%, Chinese 7% and Indians 15%. The most common indication is recurrent tonsillitis. There were 4 cases of secondary hemorrhage where the patients presented with bleeding one week after the tonsillectomy.

CONCLUSION : Due to our sheer number of cases from the year 2006 till 2011, our hospital, Hospital Raja Permaisuri Bainun, Ipoh is the pioneer of daycare tonsillectomy in Malaysia. And with our numbers of successful surgeries and our minimal number of complications, we have proven that daycare tonsillectomy is safe and cost effective in eliminating the need for hospital admission.

ENDOSCOPIC RESECTION OF SINUNASAL TUMOUR : THE ROLE OF RADIOFREQUENCY COBLATION

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INTRODUCTION AND OBJECTIVE : Radio-frequency coblation has been increasingly used throughout Otorhinolaryngology. Tissues are removed by vaporization, achieved through the production of an ionized plasma vapour. The depth of vaporisation is very limited and is achieved with virtually no heat production, resulting in minimal thermal damage to adjacent tissue. The objective of this presentation is to appreciate the role of radiofrequency coblation in endoscopic resection of sinunasal tumours.

METHODS / RESULTS : We present 2 selected cases, where patients with vascular tumours confined to the nasal cavity, nasopharynx and paranasal sinuses (with no evidence of intracranial extension) undergoing coblator-assisted endoscopic resections. Both patients underwent successful pre-operative embolization followed by coblator-assisted endoscopic resection of the tumour.

CONCLUSION : Endoscopic-assisted radiofrequency coblation of sinunasal tumours has given us promising results especially in resecting tumour that is confined to the nasal cavity, nasopharynx and paranasal sinus. We believe this presentation justifies further evaluation of this interesting technique in resection of vascular sinunasal tumours.

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KIKUCHI DISEASE : AN UNSUSPECTED CAUSE OF CERVICAL LYMPHADENOPATHY

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OBJECTIVES : Kikuchi disease, also known as histiocytic necrotizing lymphadenitis, is a benign, self-limiting disease of unknown etiology. It was first described by Dr M.Kikuchi & independently by Dr Y.Fujimoto et al in Japanese literature in 1972. It is a very rare disease which typically manifest as enlarged cervical lymph nodes with intermittent fever and is unresponsive to antibiotic therapy. The clinical presentation is very similar to malignant lymphoma, tuberculosis, systemic lupus erythematosus, sarcoidosis & Kimura disease. There is preponderance towards young females from Japan and South-Asian region. We present a case of Kikuchi disease in a female of Malay descent.

METHODS : case report

RESULTS : A 22 year old female presents with 2 weeks history of multiple neck swellings associated with intermittent fever. She denied chronic cough, night sweats, loss of appetite and loss of weight. The swellings initially subsided with a course of oral antibiotics but recurred shortly after. Tuberculosis screening was negative. Due to persistent cervical lymphadenopathy, excision biopsy was performed for definitive diagnosis. The histopathological examination was consistent with Kikuchi lymphadenopathy. She was treated conservatively and on subsequent follow up, her symptoms resolved completely.

CONCLUSIONS : Kikuchi disease is an extreme rare possibility to be considered especially when dealing with a young female presenting with cervical lymphadenopathy and fever. The constellation of clinical findings consisting of cervical lymphadenopathy and fever combined with histopathological analysis provides the diagnosis. It is typically self-limited within 1 to 4 months with reported recurrence rate of 3-4%. Treatment is generally supportive with non-steroidal anti-inflammatory drugs for analgesia and anti-pyrexia. Corticosteroids have been advocated in severe extranodal or generalized Kikuchi disease.

A RARE CAUSE OF DYSPHAGIA DUE TO DIFFUSE IDIOPATHIC SKELETAL HYPEROSTOSIS : A CASE REPORT

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OBJECTIVES : Diffuse idiopathic skeletal hyperostosis (DISH) is a disease characterized by massive, noninflammatory ossification with intensive formation of osteophytes affecting ligaments, tendons, and fascia of the anterior part of the spinal column, mostly in the middle and lower thoracic regions. However, isolated and predominant cervical spinal involvement may occur. It has predilection for men (65%) over 50 years of age and prevalence of approximately 15-20% in elderly patient. CT scan is one of the diagnostic tools. The radiographic diagnostic criteria in the spine include: 1) osseous bridging along the anterolateral aspect of at least four vertebral bodies; 2) relative sparing of intervertebral disc heights, with minimal or absent disc degeneration; and 3) absence of apophyseal joint ankylosis and sacroiliac sclerosis. We present a rare case of dysphagia over 2 years duration due to DISH

STUDY DESIGN : Case report

SETTING : Secondary Referral Centre, Patient: One

RESULTS : A 55 year old Malay male who complaint of intermittent dysphagia for 2 years duration. He denies foreign body ingestion, globus sensation or any laryngeal trauma, and otherwise no other significant symptoms. On oropharyngeal examination showed a solitary smooth mass which was seen on the right lateral pharyngeal wall and was hard on consistency. There was no significant cervical lymphadenopathy. The trachea is central and the neurological examination was unremarkable. CT scan was done which showed marked ossification at the right anterolateral aspect of cervical vertebral body from C2 to C7 vertebrae most probably representing Diffuse Idiopathic Skeletal Hyperostosis. He was treated conservatively with 6-monthly follow up.

CONCLUSIONS : Dysphagia caused by hypertrophic anterior cervical osteophytes is an uncommon entity. Radiological evaluation i.e CT scan is diagnostic and can rule out other possible causes of oropharyngeal mass. Surgical decompression could bring relief of the dysphagia but some can be treated conservatively with regular follow up.

A LIVE FISH IN THE THROAT : AN UNUSUAL FOREIGN BODY

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INTRODUCTION : Foreign body in aerodigestive tract is not uncommon. However, live fish as a foreign body in the upper aerodigestive tract is rare and unusual. We report a case of a 15cm-long live fish (a species of climbing perch, *anabas testudineus*, also called Ikan puyu) in an adolescent's hypopharynx presenting with respiratory distress. A timely emergency management saved the patient's life.

ABSTRACT : A 19 year-old young man was presented to us in a state of respiratory distress with history of alleged accidental ingestion of a live fish while he was attempting to place a struggling fish onto a fishing hook as bait. Flexible nasopharyngolaryngoscope showed a big live fish impacted in the hypopharynx. Attempts to remove the fish orally were futile as the fish head was impacted, only part of the tail were removed. Eventually, we resorted to tracheostomy under local anaesthesia, followed by direct laryngoscopy and removal of the fish under general anaesthesia. He was discharged well 5 days later after removal of tracheostomy tube.

CONCLUSION : Live fish in aerodigestive tract is uncommon but timely intervention and a proper approach to such case is deemed life-saving. Emergency tracheostomy must be anticipated and done without delay if oropharyngeal intubation is impossible, or when upper airway obstruction is anticipated after removal of foreign body due to upper airway soft tissue swelling

FACIAL CARBUNCLE : CASE REPORTS

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A carbuncle is a collection of multiple infected hair follicles. It tends to occur in areas with thicker skin like the nape or neck, back and thigh. A carbuncle usually extends into the deeper layers of the skin. People with diabetes are more common to develop carbuncle. Broad spectrum antimicrobial agents and surgical intervention are often needed to eradicate this infection. Deep carbuncles are more likely to causes significant scarring and functional defect. In this case report, we present our local experience in management of facial carbuncle.

AN ARROW FOREIGN BODY IN FACIAL INVOLVING PAROTID GLAND, MAXILLARY SINUS AND TIP OF NOSE

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The fibre arrow foreign body penetrating the facial has never been reported in the literature. We describe the unusual case of an arrow of 17cm length foreign body, penetrating the parotid gland to maxillary bone reaching the tip of nose. In this case the foreign body is detected clinically. We also discuss how radiological investigation (CT scan) helps in managing the case. How CT scan helps to reveal the depth of foreign body and facial structures involved.

KEY WORDS : arrow, foreign body facial, arrow embedded in the face

BONE OR NO BONE??**Suhana A R¹, Khor K G¹, Lina L C¹, Avatar S¹, Razif M Y²**¹Hospital Taiping, Taiping, Perak, Malaysia²Universiti Kebangsaan Malaysia, Kuala Lumpur, Malaysia

Tonsillolith are calcified chemical concentration formed within tonsillar crypts. It is an uncommon presentation. The etiology of the disease is multifactorial. Patient with tonsillolith usually present with halitosis, dysphagia and other tonsillitis symptoms. Fish bone impacted in tonsil is a common presentation. However, the formation of tonsillolith caused by prolonged fish bone embedded in the tonsil is an uncommon presentation. We reported the rare case of fish bone embedded in the tonsil with tonsillolith transformation. We discuss the diagnosis, rule of radiograph assessment and management for hidden and prolonged foreign body throat in a 57 year old man.

KEYWORDS : Fish bone, tonsillolith, tonsil, foreign body throat.

CASE REPORT ON TRANS-ORAL EXCISION OF A PARAPHARYNGEAL SCHWANNOMA**Hui Tong Wong¹, Kin Choo Pua²**¹University of Malaya, Kuala Lumpur, Malaysia²Penang General Hospital, Penang, Malaysia

INTRODUCTION : Tumors of the parapharyngeal space(PPS) are highly uncommon, comprising only 0.5% of head and neck tumors. Work and Hybels found that 50% of PPS tumors were of salivary gland origin, 30% were neurogenic, and 20% were miscellaneous.

CASE REPORT : We presented a case of a 24-year-old lady with parapharyngeal schwannoma. She presented to the clinic with 2 months history of right throat discomfort. Physical examinations show that there were a right lateral pharyngeal mass extending from soft palate down towards the vallecula. A contrasted CT Neck show a well-defined right parapharyngeal mass at the level of oropharynx measuring 3.8x3.7x4.3cm which has heterogenous contrast uptake. She underwent intra-oral excision of tumour 2 days after angiogram and embolization. The tumour measures 4x3cm extending from the hard palate to the tip of epiglottis which was excised completely with capsule.

DISCUSSIONS : Although schwannomas are typically benign, they may affect adjacent tissues by expansion with pressure effect. Complete surgical resection is the treatment of choice . If the schwannoma is completely removed, recurrence rates are extremely low. There are 4 main surgical approaches including transcervical, transoral, transparotid and mandibular swing approach. Some authors believe that a transoral approach is cotraindicated for large parapharyngeal lesions (more than 3 cm) because of potential risk of hemorrhage, damage of the cranial nerves, tumor spillage and decreased exposure. But in our case, there was no adhesion between the tumor and surrounding tissue as suggested by CT scan, so it was removed relatively easily. Intra-operatively the bleeding was minimal. The patient recover fast post-operatively and there was no scar.

CONCLUSION : Trans-oral approach remains a good option tumour size is small and there is no adhesion. Trans-oral approach reduces the post-operative morbidity and improves cosmetic outcome.

EVIDENCE-BASED CASE REPORT OF ENDOSCOPIC SINONASAL SURGERY OF JUVENILE NASOPHARYNGEAL ANGIOFIBROMA

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BACKGROUND : Juvenile nasopharyngeal angiofibroma (JNA) is a histologically benign, but locally invasive neoplasm occurring most often in adolescent males. These tumors are highly aggressive and are associated with significant morbidity and mortality due to its tendency to bleed.

PURPOSE : To present an evidence based case-report on endoscopic removal of JNA as an alternative technique besides the open approach.

CASES : One case of JNA managed with endoscopic removal and the radiological description analysis, giving benefits in endoscopic surgical planning.

MANAGEMENT : The classical treatment for JNA is surgery, however there are cases in which may indicate radiotherapy or even hormonal therapy and gamma knife surgery. Recent advances in technology enable surgeons to use the endonasal techniques as an alternative in treating JNA patients.

CONCLUSION : Endoscopic removal of JNA was successfully performed for T1 and T2 tumor based on Fisch classification. To support a good management for JNA cases endoscopically, careful considerations should be made to determine access toward the predominant attachment of the tumor to sphenopalatine foramen and pterygoid plate. Rhinologists and oncology-head and neck surgeons should have deep understanding of endoscopic anatomy of lateral nasal wall and mastering the art of four-hand technique of endoscopic sinonasal surgery.

KEYWORD : angiofibroma, endoscopic surgery, sphenopalatine artery

INTRATHYROIDAL PARATHYROID GLAND : CASE REPORT

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BACKGROUND : Intrathyroidal parathyroid glands are a rare entity. The reported incidence is around 0.5%-1%. We present two cases of patients with ITPG and briefly described their intra-operative findings and management.

CASE PRESENTATION : Patient A, a 46-year old lady with end-stage renal failure on regular haemodialysis, presented with tertiary hyperparathyroidism. Two enlarged parathyroid glands (PT) were seen on the ultrasound scans. The Sestamibi scan was unremarkable. Neck exploration was performed but only two enlarged parathyroid glands were found and removed. Post-operatively, her serum parathormone remained elevated. A repeat Sestamibi scan showed uptake on the right side of the neck. A second neck exploration was performed and no parathyroid gland was found. Decision made to perform right thyroid lobectomy as Sestamibi scans strongly suggestive of location of remaining parathyroid. Histopathological analysis revealed an intra-thyroidal parathyroid gland in the right thyroid lobe. Patient B, a 50-year old man with end-stage renal failure on regular haemodialysis presented with tertiary hyperparathyroidism. Ultrasound scans showed two enlarged parathyroid glands, one on each side. Sestamibi scans were unremarkable. Neck exploration was performed and two enlarged parathyroid glands were found and removed. Post-operatively the patient had persistently elevated serum parathormone and calcium levels. A repeat Sestamibi scan revealed positive uptake on the right side of the neck. A subsequent neck exploration did not yield any parathyroid glands. Decision made to perform right thyroid lobectomy based on Sestamibi scans. Cut specimen showed intrathyroidal parathyroid gland which was confirmed on histopathology. The postoperative period was uneventful for both the patients. Their serum parathormone and calcium levels fell after surgery.

CONCLUSION : The possibility of intrathyroidal parathyroid adenoma should be borne in mind if the parathyroid glands are not found during surgery and the Sestamibi scans shows positive uptake. In these cases, although it is not a standard procedure, a thyroid lobectomy may be considered. An intrathyroidal parathyroid gland may not be as rare as previously thought.

EOSINOPHILIC ANGIOCENTRIC FIBROSIS OF THE SUBGLOTTIC REGION OF THE LARYNX

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Eosinophilic angiocentric fibrosis (EAF) is a rare inflammatory fibrosing condition of unknown aetiology that involves the sinonasal tract and the upper respiratory airways, and rarely, larynx, and orbit, producing mucosal thickening and severe obstructive symptoms. The condition is characterized histologically by concentric layers of fibrosis around small-caliber arteries and a mixed inflammatory infiltrate dominated by eosinophils.

We report the first case affecting a male. He presented with hoarseness of voice, dysphagia and mild shortness of breath. The patient had no known history of allergy or any other disease. The clinical and histopathological features of the condition are discussed. Surgical excision was performed. Histologically, thick collagen bundles were seen, characteristically whorling around vessels in a fibrotic stroma. Inflammatory cells, rich in eosinophils, were scattered throughout the lesion. No granulomas, necrosis, or vessel destruction were present. A diagnosis of eosinophilic angiocentric fibrosis was made. The clinical and histopathological features and differential diagnoses of this

GORING NECK INJURY CAUSED BY AN ASIAN WATER BUFFALO : A CASE STUDY

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INTRODUCTION : Goring injuries are an occupational hazard amongst those involved in the farming and animal husbandry trade. The range of trauma varies widely, but most literature found on the subject have focused on abdominal and perineal trauma, with only a handful of cases relating to neck trauma.

In Malaysia, cases of goring neck injuries have been largely unreported in medical literature. The authors here present a rare case of a goring injury which was caused by a domesticated Asian water buffalo, resulting in a penetrating injury through the neck into the oral cavity.

BACKGROUND : A 34 year old farmer presented to a district hospital with an anterior neck wound. The injury was sustained when he was gored in the neck by a charging buffalo. Of his own initiative, the patient had packed the wound firmly with mud and leaves which had hardened to create a tamponade effect, stemming further blood flow from the puncture wound. Upon arrival at the tertiary hospital, the wound was thoroughly washed

and cleaned prior to primary closure of the wound via intraoral and external approach. Despite a course of parenteral antibiotics, the patient developed a secondary infection and suffered a minor wound breakdown. However, the infection subsided and patient recovered satisfactorily with no further complications.

CONCLUSION : This case describes an uncommon goring neck injury which was successfully managed via a combination of both traditional and modern medicine.

CHARM NEEDLE MISTAKEN FOR FOREIGN BODY

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INTRODUCTION : Supernatural beliefs still exist in this modern era. People seek help from shaman in various aspects, especially in enhancing their looks. Fine charm needles are placed in different parts of body, mainly in the facial region. Most of the people who undergo this procedure will keep the matter concealed. We are reporting a case of charm needle in the glabella region mistaken for a foreign body.

METHOD : Case Report study

BACKGROUND : A young lady was referred as a case of nasal bone fracture. She was involved in a road traffic accident and sustained nose bleed with nasal bridge deformity. Her nasal bone x-ray revealed anteriorly displaced nasal bone fracture with a fine, vertically placed linear foreign body at her glabella. Patient initially denied any intentional insertion of charm needle as she was accompanied by family members. She was then planned for reduction of nasal bone with exploration and removal of foreign body under general anesthesia. However on the day operation she admitted that she had a charm needle placed on her nose 3 years back. Thus, only nasal bone reduction was done.

LEARNING POINT : Foreign body placed into the body with consent such as charm needles should be differentiated from foreign bodies acquired during trauma. This can be achieved with proper history along with careful and meticulous study from nasal bone x-ray.

CONCLUSION : This case describes a charm needle in the facial region mistaken for a foreign body acquired during road traffic accident. Proper history, examination and investigation are required to avoid any unwanted intervention on the patient.

THE RARITY OF BILATERAL CERVICAL LYMPH NODE METASTASES IN ONCOCYTIC CARCINOMA OF RIGHT PAROTID GLAND - A CASE REPORT

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Oncocytic carcinoma is a rare proliferation of cytomorphologically malignant oncocytes mainly found in the glandular tissue. Only a few cases of oncocytic carcinoma of the salivary gland origin have been reported in English journals. We report a case of oncocytic carcinoma arising in the right parotid gland of a 67-year-old man. He was referred to our centre for cervical lymph nodes metastasis and local recurrence even after multiple surgeries over the right parotid gland and underwent radiotherapy twice. Our review of the literature suggests that patient with such tumour who undergoes aggressive surgery serve a better prognosis than conservative management and radiotherapy.

CASE REPORT : CERVICAL VAGAL SCHWANNOMA

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Schwannoma is a rare benign neoplasm of neurogenic origin which arises from the Schwann cells surrounding the peripheral, cranial and autonomic nerves. The commonest presentation of extracranial head and neck schwannomas is a slow growing isolated neck lump. Fine needle aspiration cytology (FNAC) is commonly used to investigate such neck lumps but it may be diagnostically challenging in cases of schwannoma. We report a rare case of cervical vagal schwannoma which was initially misdiagnosed as tuberculous lymphadenitis. The patient presented with a right neck swelling of 20 years duration, whereby initial FNAC revealed granulomatous lymphadenitis. A diagnosis of tuberculous lymphadenitis was made but the swelling did not resolve despite completing full course of anti-tuberculous drug therapy. A repeat FNAC was done, showing features of spindle cell tumour, suggestive of schwannoma while computed tomography (CT) scans suggested that it originated from the vagus nerve. Excision of the mass was performed and the diagnosis of vagal schwannoma was confirmed with histopathological examination. Unfortunately, the patient developed right vocal cord palsy which was eventually fully compensated by the sixth post-operative month.

CERVICAL MALIGNANT PERIPHERAL NERVE SHEATH TUMORAsmat A¹, Brito-Mutuyanagam S¹, Shahrul H¹, Govindaraju R¹, Khairullah A²¹Department of Otorhinolaryngology Ampang Hospital, Selangor, Malaysia²Department of Otorhinolaryngology, Faculty of Medicine and Health Sciences, Universiti Sains Islam Malaysia, Selangor, Malaysia

OBJECTIVE: Malignant Peripheral Nerve Sheath Tumor (MPNST) occurs in about 2-5 % of patient with Neurofibromatosis type 1 compared with a prevalence of 0.0001 % in the general population. Average age at diagnosis patient with MPNST is 20-36 years old. Usual presentation for cervical MPNST is neck swelling with pain and neurological deficit. Delay in making a diagnosis is usually due to a disease process of malignant transformation from a pre-existing large benign tumor that is often deep seated. They are aggressive tumors that carry a poor prognosis despite wide excision and adjuvant chemoradiotherapy. Most common site for metastasis is liver, lungs and bone via bloodstream rather than lymphatic.

METHODS :**STUDY DESIGN :** Case report**SETTING :** Tertiary Referral Centre**PATIENT :** One

RESULT : A 21 years old Malay male with Neurofibromatosis type 1, presented with a painful right supraclavicular swelling for 5 months with no neurological deficits. Examination revealed a firm swelling over the right supraclavicular region measuring about 14 x 10 cm. A CT scan revealed a superficial mass involving the skin and subcutaneous layer with an impression of neurofibroma. Excision of the swelling was done and histologically reported as a high grade MPNST with involvement of the resected margin. However, within a month post operatively, another new lesion recurred progressively on the similar side with compressive symptoms and skin involvement. Despite received 8 cycles of adjuvant chemotherapy, the size of the swelling remained unchange. Unfortunately, the tumor had distant metastasis to brain and patient died.

CONCLUSION : MPNST is highly associated with Neurofibromatosis type 1. Due to its highly infiltrative nature, in addition to a complex vascularity of the neck, a wide excision with clear margin is difficult leading to a high chances for recurrence and reduced effectiveness of adjuvant chemoradiotherapy.

KEYWORDS : MPNST, Neurofibromatosis, wide excision, adjuvant chemoradiotherapy

FOLLICULAR THYROID CARCINOMA PRESENTING WITH SOFT TISSUE, BONE AND LUNG METASTASES

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Follicular thyroid carcinoma (FTC) uncommonly manifests itself as a distant metastatic lesion. Primary FTC metastasis to subcutaneous tissue is even rarer. We report a case of a 57-year-old woman who presented with a 2-week history of left hip pain. Physical examination revealed a tender left hip, a large non-tender soft tissue mass in the right hip region and a long-standing goitre. Plain radiographs showed a fractured left neck of femur, a soft tissue mass in the right hip and bilateral cannon ball lesions in the lungs. Fine needle aspiration cytology of the right hip mass and the thyroid showed follicular neoplasm. Incidentally, the patient was also found to have T3 thyrotoxicosis. The provisional diagnosis was that of FTC with metastases to the right hip, left femur and lungs. A total thyroidectomy was performed followed by transarterial embolisation and tumour debulking of the right hip mass. The thyroidectomy was performed successfully. Unfortunately, a few days after the transarterial embolization and tumour debulking, the patient succumbed to respiratory failure. This case of follicular thyroid carcinoma is reported because of its uncommon initial presentation with pathological neck of femur fracture with synchronous metastases to lung and soft tissue.

METASTATIC GIANT CELL TUMOUR OF THE HYPOPHARYNX : A CASE REPORT

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Approximately 2% of all giant cell tumours arise in the head and neck region, with the majority of them occurring in the sphenoid, ethmoid, or temporal bone. Primary giant cell tumours of the hypopharynx are exceedingly rare. A search from medline reveals only one such case reported thus far. We present a case of a 76-year-old man with a 3-day history of worsening shortness of breath and noisy breathing. CT scan shows irregular and heterogenous mass at left hypopharynx with extensive local infiltration and distant metastasis to the lungs, liver and bone. Immunohistochemistry shows osteoclast like giant cells with positive CD68. In view of advanced disease, patient opted for palliative care. He finally succumbed to his illness a month after the presenting symptoms

PAROTID METASTASIS FROM OLFACTORY NEUROBLASTOMA - A RARE PRESENTATION

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Of the many types of malignancies known, Neuroblastoma is one that is more common in children compared to adults. Neuroblastoma is frequently erroneously diagnosed as other tumors, such as primitive neuroectodermal tumor (PNET)/Ewing's sarcoma (ES) and olfactory neuroblastoma, often due to the its primary location and the fact that in some instances convincing documentation to support a diagnosis is lacking. Although the most common site of the malignancy is the cervical lymph node, which has a reported metastatic rate of 20% to 60%, other sites reported include the parotid glands, skin, lungs, bone, liver, orbit, spinal cord and spinal canal. The case presented in this paper describes an uncommon case of olfactory neuroblastoma with parotid metastasis.

A 76-years old female was presented in November 2011 with a right parotid swelling of 3-months old, with no signs of pain or fever. Incidentally, the patient was earlier diagnosed with olfactory neuroblastoma in 1998 in the left nasal cavity. Despite having undergone excision of the tumor and subsequently radiotherapy, a recurrence was reported in the cervical nodes in the year 2004. The second occurrence was removed by bilateral supraomohyoid neck dissection. Patient was on regular follow-ups and did not show any signs of recurrent until the current presentation. Superficial parotidectomy and completion neck dissection done, and HPE of parotid mass confirmed recurrent neuroblastoma.

The peculiarity of this case is in the presentation of the parotid metastasis in spite of initial aggressive treatment with surgery and radiotherapy. Further investigation of this uncommon presentation leads to the conclusion that comprehensive monitoring and long term follow-up of patients with neuroblastoma is crucial in early detection of regional relapse and distant metastasis

A RARE COMPLICATION OF TOTAL THYROIDECTOMY : ESOPHAGEAL STENOSIS

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A 60-year-old Chinese man with multi-nodular goiter was admitted for total thyroidectomy. Postoperatively, patient developed dysphagia to solid foods, which was progressive in nature. In further investigation days after surgery, barium swallow and CT scan revealed stenosis in cervical esophagus. Nasogastric feeding started for patient and it was planed for endoscopy and dilatation later. Patient continued his follow up in another center. In this case report we describe the possible causes of dysphagia post thyroid surgery and also other rare complication of thyroid surgery in particular esophageal complication.

LIPOMA OF THE FLOOR OF MOUTH : A RARE CASE REPORT

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Lipoma of the floor of the mouth is rare. When present clinically they may mimic the ranula in the floor of the mouth. The diagnosis may be made only intraoperatively and confirmed by histopathological examination. Differentiation is important as the surgical procedure for ranula is marsupialization and lipoma is complete excision. Here we present a rare case of lump in the floor of the mouth which was diagnosed as ranula and intraoperatively found to be lipoma.

COMPARATIVE ANALYSIS OF MANAGEMENT OF HEAD AND NECK ABSCESSSES IN HOSPITAL TELUK INTAN

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OBJECTIVE : To evaluate the efficacy of aspiration vs. incision and drainage (I&D) in the management of head and neck abscesses.

METHOD : A retrospective review from February 2012 to April 2013 of patients having head and neck abscesses in Otorhinolaryngology Department Hospital Teluk Intan. Their demographics, size of abscess, associated systemic diseases; choice of treatment, length of hospital stay (LOHS) and bacteriology were reviewed.

RESULTS : 18 patients were identified. 10 patients were female (56%) and 8 patients were male (44%) with age ranging between 1 to 65 years old. Relative frequencies of location of abscess were as follows, parotid 7 cases(38%), posterior triangle were 3 cases(16%), submandibular space and level II region each 2 cases(11%) and submandibular, submental, level III/ IV and post auricular region each 1 case(6%). Predisposing factor mainly diabetes mellitus was identified in 7 patients (38%). Significant difference found in mean LOHS between patients who were treated via I&D under general anesthesia(GA)(3.3days) vs. I&D under local anesthesia (LA) (5.8 days) vs aspiration(7.6 days) vs. combination of aspiration and I&D(14 days).

CONCLUSION : Surgical drainage with GA and LA is a more effective mode of treatment in head and neck abscesses compared to aspiration, as it results in a shorter LOHS.

PERSISTENT CHYLOUS LEAK FOLLOWING TOTAL LARYNGECTOMY AND RADIOTHERAPY : NEGATIVE PRESSURE SUCTION DRESSING TREATMENT

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OBJECTIVE : To present a case of postoperative chylous leak following an excisional biopsy of cystic swelling in a post radiated total laryngectomy patient treated successfully with negative pressure suction dressing following failed medical management and even surgical intervention.

CASE REPORT : A 66 year old male patient underwent total laryngectomy for a stage 4 (T4N0M0) followed by external beam radiotherapy noted a cystic swelling over right supraclavicular region 3 months following the radiotherapy. Computed tomography (CT) of the neck showed a cystic lesion and aspiration of the fluid for cytology examination excluded metastatic neck nodes. Exploration of the neck was complicated by chylous leak. Low fat enteral diet, compression dressing and total parenteral nutrition with medium chain triglyceride failed to reduce the chylous leak. Trial of sclerosant therapy and re-exploration of the neck were also unsuccessful. Negative pressure suction dressing was applied and successfully stops chylous leak. There was no chylous leak or recollection after 5 months of monitoring.

CONCLUSION : Negative pressure suction dressing is a viable treatment modality for postoperative chylous leak and reduces the need for invasive methods.

KEY WORDS : Chylous leak; laryngectomy; negative-pressure dressings; cancer of larynx

COLLECTION OF CASES WITH UNUSUAL FOREIGN BODIES OF THE HEAD AND NECK

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This retrospective review consists of a series of unusual foreign bodies that presented to the Department of ENT, Hospital Ipoh since 2003 until 2012. The foreign bodies included a transorbital chop-stick, a metal grass-cutter blade in the upper airway, an arrow in the maxillary sinus, a cutting burr in the left cheek, a sharp pin in the oesophagus, a razor blade in the hypopharynx and recreational drug in nasal cavity. The aetiology of these unusual presentations was occupational related, accidentally swallowed or due to underlying psychiatric illnesses and one intentional due to criminal intent.

METHODS : Retrospective review of unusual foreign bodies presented to the Department of ENT Hospital Ipoh from 2003 to 2012. The objective of this study was to identify the predisposing factors of these cases.

CONCLUSION : This report identifies history of psychiatric illness or psychological problems as a predisposing factor for unusual foreign bodies of the head and neck among adults. Besides that, work related injury, trauma, iatrogenic and intentional insertion to avoid being arrested are also reasons for these unusual foreign bodies.

HUGE SUBMANDIBULAR STONE

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INTRODUCTION : Sialolithiasis is the most common disease of the salivary glands. In patients with multiple stones, calculi may be located in different positions along the salivary duct and gland. Stones in the hilum of the gland tend to be oval, whereas stones in the duct tend to be elongated. Commonly, sialoliths measure from 1 mm to less than 1 cm. Giant salivary gland stones (GSGS) are those stones measuring over 1.5 cm and have been rarely reported in the medical literature.

MATERIAL AND METHODS : A 71-year-old male presented with history of painless right submandibular swelling for 2 weeks. It was not associated with fever. He had history of hypertension and diabetes and currently on medication. Examination revealed a right submandibular swelling, measuring 6 x 5 cm, non-tender, mobile and firm in consistency. There was no other swelling palpable in the neck. Intraorally, there was pus was noted at the right wharton's duct orifice. Intraoral bimanual palpation revealed ballotable right submandibular swelling.

RESULTS : Computed tomography of the neck showed a radiopaque mass in the submandibular gland and in the duct. A diagnosis of right submandibular stone was made. He underwent excision of right submandibular gland under general anaesthesia. Intraoperatively, the gland was thickened. It was noted that there was another bulge along the submandibular duct which turned out to be few pieces of stone in the duct. The size of the stone was about 2.5 cm. Post-operative recovery was uneventful. Histopathological examination revealed severe acute on chronic sialadenitis with calculus.

CONCLUSION : Once the diagnosis of an intraglandular salivary stone is established, removal of the entire gland via an extraoral approach is recommended. CT scan is useful to detect multiple stone especially when it involved proximal duct.

GRAVEFUL IATROGENIC TRACHEOESOPHAGEAL FISTULA SECONDARY TO STENTING OF POST IRRADIATED ESOPHAGEAL STRICTURE : CASE REPORT

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INTRODUCTION : Acquired tracheoesophageal fistula (TOF) is a rare but serious complication of esophageal stenting for both benign and malignant esophageal diseases. It is a surgical emergency which warrants urgent treatment as the patent tract from airway to esophagus bypasses the normal protection offered by laryngeal reflexes. Various pulmonary complications will follow.

CASE REPORT : We report a young gentleman who developed TOF at post esophageal stenting day 14 for his benign proximal esophageal stricture (secondary to irradiation for his Diffuse Large B cell lymphoma of cervical spine). After the esophageal stenting (Hanaro self-expanding metallic covered stent, 10cm), he developed severe respiratory distress and stridor. He was subjected to emergency tracheostomy in view of airway obstruction and urgent CT showed subglottic and tracheal narrowing. Bronchotelescopy revealed inflamed trachea with posterior tracheal wall compression. He did improve with intravenous antibiotic and was deccanulated. However, the deccanulation could not last for more than a day till he developed another episode of respiratory distress with symptoms of aspiration and abdominal distention. Repeated bronchotelescopy showed massive TOF, starting 6 cm from vocal cords to the carina with esophageal stent already migrated into trachea. He passed away due to failure of pulmonary oxygenation.

CONCLUSION : Esophageal stenting carries risk of TOF. It is even higher with counter pressure from tracheostomy. Factor such as irradiation further exacerbates the risk. Proper selection of candidate with least risk factors is important prior esophageal stenting.

KEYWORDS : Tracheoesophageal fistula, esophageal stent, Irradiation

GREYISH-WHITE LARYNGEAL MEMBRANE FOUND IN TONSILLITIS DIPHTHERIA PATIENT'S DURING TRACHEOSTOMY : IS IT A SIGN OF SYSTEMIC TOXIN SPREAD?

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OBJECTIVES : Diphtheria is a serious health problem before the vaccination era and it has been an epidemic worldwide, especially in the developing countries including Indonesia. The transmission of diphtheria is by droplet spread through contact with an infected person. Clinical manifestations of diphtheria depend on the source of infection, immunological status and systemic toxin spread. The signs of diphtheria exotoxin spread include heart disease, renal failure, cranial nerve palsy, respiratory and circulation failure. In Children, upper airway obstruction or systemic toxin effects of diphtheria is the most common cause of death. The grayish-white laryngeal membrane that found in our cases during tracheostomy could be one of a signs of deterioration in diphtheria patients that lead to systemic toxin spread and mortality due to multiple organ failure.

METHODS : All the patients received primary tracheostomy for life saving to maintain the adequate airway. Pathology anatomy examination was performed to confirm diagnosis.

RESULTS : Three cases of tonsillitis diphtheria came with upper airway obstruction and underwent primary tracheostomy. Greyish-white laryngeal membrane was found during tracheostomy and the patients died due to multiple organ failure.

CONCLUSION : Diphtheria infection is an emergency disease that should be treated properly with anticipation for the systemic spread of toxin that could lead to multiple organ failure and mortality. From three cases of tonsillitis diphtheria, greyish-white laryngeal membrane was found during tracheostomy and this could be consider as a sign of systemic toxin spread of diphtheria.

KEYWORD : Tonsillitis diphtheria, upper airway obstruction, tracheostomy, greyish-white laryngeal membrane, systemic toxin.

EXTRALARYNGEAL INVOLVEMENT OF RECURRENT RESPIRATORY PAPILOMATOSIS IN UNIVERSITY KEBANGSAAN MALAYSIA MEDICAL CENTRE

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INTRODUCTION : Recurrent respiratory papillomatosis (RRP) is a benign laryngeal disease occurring in 4.3 per 100,000 children. Its causative factor arises from HPV 6 and 11 where the 11 variant is more virulent and more prone to have distal laryngeal spread. This extralaryngeal spread has been found to have high association with the presence of tracheostomy.

OBJECTIVE : To report the incidence of extralaryngeal involvement in RRP and clinical presentation of RRP in both juvenile onset RRP (JORRP) and adult onset RRP (AORRP).

METHODS : A retrospective review of 31 patients treated in Universiti Kebangsaan Malaysia Medical Centre between 2001 and March 2013. The number of surgical procedures, lower airway involvement and course of disease were analyzed.

RESULTS : In all 31 patients, laryngeal papillomatosis were the initial presenting feature, where 18 were of juvenile onset and 13 were of adult onset RRP. The age at presentation was 8 months to 10 years old in juvenile age group and 20 to 65 years in adults. Nine children had extralaryngeal involvement and among them, 4 had tracheostomy done. One child with tracheostomy has multiple extralaryngeal involvement and dysplastic changes. There was no tracheostomy done for the adult group in our series. The extralaryngeal sites were namely the posterior pharyngeal wall, tonsil, hard and soft palate, uvula, carina, tracheal wall, bronchus and oesophageal opening.

CONCLUSION : JORRP has higher incidence of extralaryngeal spread compare to AORRP. Extralaryngeal spread is significantly related to the presence of tracheostomy with shorter surgical interval. Hence, authors would like to highlight the importance of regular follow-up with endoscopy in JORRP especially for those with tracheostomy

LARYNGEAL AMYLOIDOSIS : A RARE ENTITY

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Laryngeal amyloidosis is a rare disorder accounting for only 1% of all benign laryngeal tumours. This disease commonly affects the elderly and has a male preponderance. We report a 32 year old Malay lady with no known medical illness who presented to us with a long standing history of hoarseness without any other symptoms. Indirect laryngoscopy showed a smooth surfaced mass arising from the left ventricle with normal vocal cords. She underwent a direct laryngoscopy under general anaesthesia and the mass was excised with cold instruments. Histopathological examinations confirmed the diagnosis of laryngeal amyloidosis.

A WHITE BOARD NEEDLE IN THE TRACHEA

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Foreign body aspiration often occurs amongst extreme age. Most of aspirated object are; nuts, coins, metal, dental appliances. Foreign body aspiration can be life threatening. Patients with foreign body aspiration may present with choking, coughing, wheezing, haemoptysis, asphyxia and even death. The symptom depends on the site and severity of obstruction. We are presenting on a 9 year old boy with significant history of foreign body aspiration with normal physical examination but positive radiological finding of a white board needle in his trachea. We are going to discuss the acute management, diagnostic procedure of bronchoscope and role of X-ray and CT scan in cases of foreign body aspiration.

KEYWORDS : foreign body, trachea, foreign body aspiration

PSEUDOANEURYSM OF THE BRACHIOCEPHALIC ARTERY : AN RARE CAUSE OF POST-TRACHEOSTOMY BLEEDING

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OBJECTIVE : To describe a rare case of an iatrogenic pseudoaneurysm of the brachiocephalic artery as a complication following tracheostomy and review of the literature.

METHODS : A case from a tertiary referral center was reviewed.

RESULTS: A 16-year old girl with a large medulloblastoma underwent a ventriculoperitoneal shunt and a tracheostomy for a worsening hydrocephalus with dysphagia and aspiration. She presented with recurrent tracheostomy hemorrhages from the fifth post-operative day. She was found to have an iatrogenic pseudoaneurysm of the brachiocephalic artery that was demonstrated on computed tomography angiography and confirmed during exploratory surgery. Following repair of the artery, the patient contracted a severe necrotizing infection of the surgical site with erosion of the trachea. Although it was successfully reconstructed surgically, the patient succumbed to her disease soon after.

CONCLUSION : Though rare, a pseudoaneurysm of the brachiocephalic artery should be considered as a differential diagnosis of bleeding following a tracheostomy. A high index of suspicion and appropriate imaging studies are essential for early diagnosis and emergent treatment. Surgical repair through a median sternotomy is the mainstay of treatment although endovascular stent grafting may be a feasible alternative.

KEYWORDS : pseudoaneurysm, brachiocephalic artery, innominate artery, tracheostomy

FOREIGN BODY IN THE BRONCHUS : WHICH SIDE WOULD YOU THINK?

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OBJECTIVE : We wanted to see our experience in the common side of tracheo bronchial tree where a foreign body lodges.

METHOD : This is a retrospective study carried out at a tertiary referral centre. We reviewed the record of patients who were admitted to our hospital during a 10 year period from the year 2002-2011 for the treatment of aspirated foreign body into the tracheobronchial tree.

RESULT : Of these cases 12 were males (80%) and 3 were females (20%). There were two peak age group noted, the youngest being 1 year old and the oldest being 75 years old. All underwent rigid bronchoscopy for removal of foreign body with optical forceps. Foreign bodies were localised in the right bronchus in 9 (60%) cases and the left in 6 (40%) cases. There were no intra or post operative complications in this series.

CONCLUSION : Despite the anatomical positioning of the right bronchus which favours dislodgement of foreign body, it is not uncommon to get foreign body dislodged to the left as well.

RISK OF OBSTRUCTIVE SLEEP APNEA AND ACCIDENT PREDICTING FACTORS AMONG HOSPITAL AMBULANCE DRIVERS IN SARAWAK

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OBJECTIVES : To determine the risk of obstructive sleep apnea (OSA) in hospital ambulance drivers in the state of Sarawak.

To determine the OSA-associated predictors of road traffic accidents in local setting.

METHOD : This is a cross-sectional study which was conducted from December 2011 – May 2012 in twenty three government hospitals in the state of Sarawak. 176 drivers were recruited. A questionnaire composed of the drivers' demographics, duty description, physical examination, Epworth scale and Berlin questionnaire was completed by participants. Job security was reassured for the confidentiality of the information given. Risk of OSA was determined by the validated Berlin questionnaire. The correlation of road traffic accident with OSA risk factors was analyzed by using the multiple logistic regression.

RESULT : 22.7% of the drivers were at high risk of OSA according to Berlin questionnaire. Neck circumference, high risk in Berlin questionnaire and Friedman Grade ≥ 3 soft palate were the significant accident predicting factors.

CONCLUSION : All ambulance drivers should be screened for risk of OSA before the recruitment. The neck circumference, low lying soft palate and high risk in Berlin questionnaire were the significant accident predictors and need to be emphasized in pre-employment screening.

SYNOVIAL SARCOMA OF MIDDLE EAR : A RARE SITE

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INTRODUCTION : This article is reporting a case of synovial sarcoma that involved the middle ear. Sarcoma represents only 1% of all head and neck malignancies and middle ear involvement is reported extremely rare. Synovial sarcoma is commonly affected the soft tissues which are close to tendon, bursae, or juxta-articular membranes.

METHOD : Patient's case notes including radiological findings was analyzed and presented.

CASE PRESENTATION : A 39 years old lady presented with 2 months history of reduced left hearing , otalgia, tinnitus and occasional vertigo. Examination revealed inflamed left tympanic membrane with sagging of the posterosuperior wall of the left external auditory canal. HRCT temporal bone showed soft tissue density in the middle ear with erosion to the ossicles, facial nerve canal and lateral aspect of the cochlear. Cortical mastoidectomy and exploration was performed and noted tumour in the middle ear, extending anteriorly into Eustachian tube, inferiorly to hypotympanum, laterally to tympanic membrane and medially covering the facial nerve canal. The tumour was not completely removed due to bleeding. Biopsy confirmed for synovial sarcoma and intense-modulated radiotherapy (IMRT) was given for the residual tumour. However, post IMRT patient developed in field relapsed tumour. Patient completed palliative chemotherapy and currently still under surveillance follow up to monitor the progression of the tumour.

CONCLUSION : Synovial sarcoma of the middle ear is a rare occurrence.

KEYWORDS : synovial sarcoma, middle ear.

A VERY RARE CEREBELLOPONTINE ANGLE LESION, HEMANGIOPERICYTOMA

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Hemangiopericytoma (HPC) is a rare tumor by definition and intracranial HPC make up to less than one percent of all the intracranial tumors. It is a dural base tumor and its clinical features and radiological findings are similar to meningiomas. However, cerebellopontine angle hemangiopericytomas had only been reported twice and would almost always be misdiagnosed. Definite diagnosis is important as the treatment of HPC is different from meningiomas and acoustic neuromas. We are reporting a case of a young lady who presented with atypical symptoms of left cerebellopontine angle mass with an initial diagnosis of acoustic neuroma. A literature review of the nature of the disease, radiological findings, immunohistochemical features and treatment options of the tumor are described.

PREVALENCE OF SUPERIOR SEMICIRCULAR CANAL DEHISCENCE AND OVERLYING BONE THICKNESS IN COMPUTED TOMOGRAPHY

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INTRODUCTION : Superior semicircular canal dehiscence syndrome (SCDS) is a relatively rare disease. SCDS has become a possible cause of various hearing and vestibular symptoms. Temporal bone computed tomography (TBCT) is used to confirm the diagnosis. In this study, the prevalence of SCDS was investigated by TBCT performed for various reasons, and the thickness of the bone overlying the SSC was measured in selected patients. Moreover, the relationship between the clinical symptoms and the possibility of SCDS was studied.

PATIENTS AND METHODS : Many TBCT images (2000 ears of 1000 individuals) were investigated in a retrospective study. 454 individuals were males and 546 were females. Each TBCT images were classified into normal or dehiscence by the presence of dehiscence of the overlying bone of the SSC.

RESULTS : In total, 30 of 2000 ears of 24 individuals (1.5%) were found to have radiological evidence of dehiscence. Six ears involved bilateral SCDS, and the other 18 involved unilateral SCDS. Sixteen ears involved right-sided dehiscence, and 14 involved left-sided dehiscence. Of 30 dehiscences, dehiscence in 22 ears (73.3%) was present at the floor of the middle cranial fossa, and dehiscence in eight ears (26.7%) was located at the superior petrosal sinus. For 100 ears of 50 normal subjects, reconstructed temporal bone HRCT was performed to measure the thickness of the bone overlying the SSC. The average thickness of the bone was 1.02 ± 0.42 mm; four ears (4%) had dehiscence, and 47 ears (47%) were measured at 0.5-1.0 mm, which made up the majority. Most (81%) of the bone thickness was distributed from 0.5 to 1.5 mm.

CONCLUSION : In this study, the prevalence of SSCD and thickness of the bone overlying the SSC were investigated through radiological findings for use as fundamental references for future studies.

INTRA-AURAL TICK (IXODES HOLOCYLUS) INFESTATION WITH FACIAL NERVE PALSY

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Tick bite is common in Malaysia. It cause inflammation to the skin and to some extends its toxin release can cause local or systemic infiltration. Intra-aural tick infiltration is commonly found. However, rarely cases presented with facial nerve paralysis. We discuss the pathophysiology and theories of local neurological involvement and management of intra-aural tick infiltration with facial nerve paralysis.

KEYWORDS : facial nerve; tick; facial paralysis

CALCIUM HYDROXYLAPATITE INJECTION FOR THE PATULOUS EUSTACHIAN TUBE

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INTRODUCTION : The patulous eustachian tube (PET) is that the lumen remains anatomically open, even at rest. The incidence has been reported from 0.3% to 6.6%. Numerous medical and surgical treatments have been reported for PET.

PURPOSE : We introduce an injection technique for the treatment of PET using calcium hydroxylapatite.

METHOD : Calcium hydroxylapatite is one of the injectable soft tissue fillers. In particular, its biocompatibility, ease of use, and enhanced durability offer physicians flexibility in both infection and areas of application.

RESULT : A 50-year-old man complained of both ear autophony, tinnitus and aural fullness for several years. Under local anesthesia, we injected the calcium hydroxylapatite submucosally into the anterior and posterior aspects of the nasopharyngeal eustachian tube (ET) orifice using a 30°, 4mm nasal endoscope. The patient achieved complete symptomatic relief.

CONCLUSION : The injection of calcium hydroxylapatite has shown to be effective and safe in this management of PET.

FUNCTIONAL OUTCOME OF THE FACIAL NERVE PARALYSIS AFTER LATE SURGICAL DECOMPRESSION IN OTIC CAPSULE SPARING FRACTURE

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Temporal bone fracture (TBF) following head trauma is a well-known cause of facial nerve paralysis (FNP) and nearly 22% of all skull fractures are TBF. It has been estimated that 25-70% of TBF are associated with FNP and otic capsule violating fracture of the petrous portion of the temporal bone is more commonly associated with FNP although otic capsule sparing fracture is more common.¹ The incidence of FNP is reported 10-25% of otic capsule sparing fracture.² With otic capsule sparing fractures FNP is often delayed 2 to 3 days, and is incomplete and temporary with good recovery during a period of 6 to 8 weeks. Most clinicians seldom consider surgical intervention in delayed FNP; however, surgical exploration may be required for complete recovery. The optimal timing for surgical exploration of traumatic FNP to best preserve facial function is currently controversial. Decompression surgery still has a beneficial effect if performed within 14 days of injury. However, late exploratory surgery is recommended in patients who did not experience recovery of facial nerve function, patients unable to be operated on early and who present 1-3 months after TBF with more than 95% denervation on Electroneurography (EnoG). Herein, we report a case of delayed onset FNP of otic capsule sparing fracture with an excellent outcome after late surgical decompression of 6 months post-trauma.

COCHLEAR IMPLANTATION AT WAHIDIN HOSPITAL

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Cochlear implantation (CI) is a safe and effective device of hearing habilitation/rehabilitation for the severe to profound hearing impaired patients who are not eligible for hearing aids. In Makassar (South Sulawesi), the first CI was performed at 2012 and the number of patients has been increased since then. I have 4 cases, the main cause of deafness in the present study was suffering from pregnancy rubella. The second one was familial congenital deafness. Congenital rubella syndrome (CRS) can occur in a developing fetus of a pregnant woman who has contracted rubella during her first trimester. In addition to an accurate audiological assessment, a search for the etiology of the hearing loss as well as associated medical conditions is critical and frequently affects the management paradigm.

The evaluation usually requires a number of studies, including imaging of the temporal bones and brain, CT scan and MRI, and careful review of medical records.

CORRELATION BETWEEN NEURAL RESPONSE TELEMETRY (NRT) MEASUREMENT LEVEL AND BEHAVIORAL (T-LEVEL AND C-LEVEL) IN PRELINGUAL COCHLEAR IMPLANT PATIENTS

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OBJECTIVES : To study the correlation between Neural Response Telemetry (NRT) measurement level and behavioral (Threshold level and Comfort level) in pre lingual cochlear implant patients age between 2 -10 years old at one and three months post implant.

METHODS : A cross sectional study conducted at University Kebangsaan Malaysia Medical Center from September 2010 to January 2012. Total numbers of hundred patients were involved in this study.

All recipients implanted with Nucleus 24 cochlear implant and had full insertion and normal activation of the electrode array. Comparison between intra-operative NRT measurement level and behavioral (T-level and C-level) in cochlear implant patients at one month and three months post implantation were obtained respectively.

RESULTS : This study showed the intra-operative NRT levels were seen to fall between the T and C levels in one and three months respectively. There was also a positive correlation between NRT value measurements and both T and C value measurements in both one and three months (p value 0.01). There is a fair strength of the linear relationship between NRT and behavioral level in both one and three month post implant as shown by the r value (0.4 at one month, 0.2 at three months)

CONCLUSION : It is useful to use the NRT values to predict the behavioral T and C values in prelingual children and an additional tool for the mapping.

KEY WORDS : Neural Response Telemetry (NRT); Threshold level; Comfort level; Nucleus 24 cochlear implant.

THE MANAGEMENT OF FIRST BRANCHIAL CLEFT ANOMALY PRESENTING WITH DOUBLE EAR CANAL AND MICROTIA

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OBJECTIVES : Double ear canal is a rare case and defined as the second external auditory meatus coexisting with a usually normal external auditory meatus. It is the result of a developmental anomaly of the first branchial cleft. The sporadic occurrence of the first branchial cleft anomalies facilitates missing the diagnosis. Surgical treatment might then be inadequate or even detrimental, leading to recurrence, secondary infection, or damage to the facial nerve. Otorrhea is a common otological symptom in this anomaly.

METHODS : Canaloplasty and tympanoplasty surgery was performed for the double ear canal.

RESULTS : A nine years old girl diagnosed with double ear canal and microtia had already underwent canaloplasty and tympanoplasty, and from eight months follow up there were dry ear, no signs of infection or stenosis.

CONCLUSION : There are potential difficulties in diagnosis and management of first branchial cleft anomalies. Incorrect diagnosis and mismanagement lead to persistence or recurrence of the original lesion. The lack of case and surgeon's experience are also the big issue.

KEYWORD : first branchial cleft anomaly, canaloplasty, tympanoplasty, double ear canal, microtia

COMPLICATING FACTORS IN MICROTIA RECONSTRUCTION

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BACKGROUND : Microtia is defined as malformation of the auricle, ranging from minimal abnormalities to major structural alterations or even total absence of the external ear. The incidence of microtia is reported varying from 0.83 to 17.4 per 10,000 births.

PURPOSE : To present the complicating factors in microtia reconstruction and better management of future ear reconstruction surgeries.

CASES : One case of an 8-year-old girl with bilateral microtia and the factors that complicate ear reconstruction.

MANAGEMENT : Patient with bilateral microtia was managed with surgery using the first stage of Nagata technique ear reconstruction on one of the ears. Several factors complicate the ear reconstruction preoperatively, intraoperatively and postoperatively.

CONCLUSION : Ear reconstruction is one of the most challenging surgeries faced by the reconstructive surgeon, because the external ear has a complex contour and almost all basic techniques in plastic and reconstructive field, such as skin flap, fascia flap and cartilage transplantation, are used in the process. Complicating factors contributes in the success rate of ear reconstruction. Careful considerations and postoperative care is important in the management of microtia patients.

KEYWORD : microtia, ear reconstruction, complicating factors

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NASAL MUCOEPIDERMOID CARCINOMA – A RARE CASE

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Mucoepidermoid Carcinoma commonly arises from the salivary glands, especially the parotid. The authors present a rare case of mucoepidermoid carcinoma arising in the nasal cavity and nasopharynx

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SOLITARY EXTRAMEDULLARY PLASMACYTOMA OF THE SPHENOID SINUS : A CASE REPORT

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Solitary extramedullary plasmacytomas are rare, discrete mass of neoplastic monoclonal plasma cells in the soft tissue with no evidence of multiple myeloma. They constitute 3% of all plasma cell tumors and less than 1% of head and neck malignancies. A 43 year old lady presented to our clinic with complains of diplopia and headache for 4 weeks. Computed Tomography scan showed a mass lesion in the sphenoid sinus eroding the sinus floor, right wall, basisphenoid and parasellar area. A biopsy of the mass reported a plasmacytoma. Systemic examination revealed no evidence of dissemination of the disease confirming the diagnosis of a solitary extramedullary plasmacytoma. The patient was subsequently subjected to 25 fractions of radiotherapy. Here, we report a rare case of solitary extramedullary plasmacytoma of the sphenoid sinus.

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NASOPHARYNGEAL ACTINOMYCOSIS WITH ATLANTOAXIAL DISLOCATION IN POST IRRADIATED NASOPHARYNGEAL CARCINOMA : CASE REPORT

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INTRODUCTION : Nasopharyngeal carcinoma is a neoplasm commonly found in population of South East Asia. The mainstay of treatment is high dose irradiation. Complications from radiotherapy are not uncommon especially to those nearby structures such as vertebrae and spinal cord. Nasopharyngeal actinomycosis is also a very rare entity seen in post irradiated tissue. It is well known of its contiguous spread, suppurative and non caseating granulomatous reaction.

CASE REPORT : We present a 57 year old gentleman with nasopharyngeal carcinoma (T3N3M0, WHO type III) treated with chemoradiation. He received external beam radiotherapy for 35 conventional fractions with total dose of 70 grays. He was well with mild nasal regurgitation symptoms till 6 months later, presented with bilateral nasal discharge, blockage and fever for 2 weeks. Other associated symptoms were progressive neck stiffness and right neck pain. Clinical examination revealed right neck paraspinal muscle spasm, inflamed skin and meningism. There were no neck mass, spinal tenderness or neurological deficit. Nasoendoscopy showed inflamed nasopharyngeal mass where biopsy was taken. Urgent Computed Tomography (CT) brain and cervical spine showed asymmetrical nasopharynx with retropharyngeal and anterior epidural collection with extension into paraspinal muscles and atlantoaxial bone with spinal cord compression. Histopathological specimen revealed multiple actinomycetes colonies. Surgical intervention was offered but was refused by patient. Despite skull tong traction and intravenous ampicillin for 6 weeks, he still deteriorated neurologically.

CONCLUSION : Irradiation in NPC is known to cause atlantoaxial instability. It also renders tissues hypoxic and risk of getting rare infection like actinomycosis. It must always be bore in mind so as to come to diagnosis and management earlier to prevent spreading of the disease.

KEYWORDS : Nasopharyngeal actinomycosis, Atlantoaxial dislocation, Radiotherapy

ENDOSCOPIC EXCISION OF METASTATIC EWING'S SARCOMA TO THE ORBIT

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Ewing's sarcoma is a primary malignant bone tumour. Metastasis to the orbit is a very rare entity. We present a 15 year old boy with Ewing's sarcoma of the right proximal tibia stage IV. He developed right extraconal orbital metastasis eight months post-chemoradiotherapy. This case report describes how we manage the metastatic lesion in the superomedial orbital space via endoscopic endonasal approach. Endoscopic approach to superomedial orbital space is safe and useful procedure without compromising on the surgical margins and preserving facial cosmesis.

CRANIOPHARYNGOMA WITH OBSTRUCTIVE SLEEP APNEA : AN UNUSUAL PRESENTATION

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Craniopharyngiomas are rare, mainly sellar/parasellar region epithelial tumors diagnosed during childhood or adult life and commonly presented with CNS symptoms. We report a 11 year-old Malay girl with a unique presentation of craniopharyngioma. The unfortunate child presented with nose block and sleep disturbances secondary to obstructive sleep apnea. There were no signs and symptoms of neurological impairment. The nasoendoscopic and radiological examination shows a huge midline tumor arising from sellar/parasellar area with complete obstruction of posterior choana. Intraoperative findings and histopathological examination of the tumor consistent with craniopharyngioma.

BILATERAL MASSIVE NASAL POLYPOSIS

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Nasal polyposis can be defined as a chronic inflammatory disease of the paranasal sinus mucosa leading to a protrusion of benign oedematous polyps from the meatus into the nasal cavity. They are usually bilateral and commonly arises from the ethmoid sinus. It has an incidence rate of 1-4% in adults and are more common in patients over 40years³. Massive nasal polyps may cause obstructive sleep symptoms, obstructive mouth breathing and in rare cases acute upper airway obstruction with stridor

Although nasal polyposis is a common ENT condition, it is uncommon to see presentation of massive nasal polyposis. We present a case report of a 77years old lady with unusually large nasal polyps. She had presented to us due to the social stigma of her massive nasal polyps. She eventually underwent endoscopic sinus surgery and on follow-up showed no recurrence thus far.

ASSISTED LOCO-REGIONAL ANAESTHESIA FOR ENDOSCOPIC ENDONASAL DACRYOCYSTORHINOSTOMY WITH CONCOMITANT SEPTOPLASTY

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Epiphora remains one of the most bothersome presentations of lacrimal system obstruction with significant social impact. Standard treatment for nasolacrimal duct obstruction has been dacryocystorhinostomy (DCR) surgery. Endoscopic endonasal dacryocystorhinostomy (EnDCR) has been gaining popularity, largely due to technological advances in endoscopes and other modern instruments used for rhinologic surgery. EnDCR can be done under loco-regional anaesthesia in elderly and medically unfit patients for general anaesthesia. EnDCR is a viable alternative to external DCR; co-existing sinonasal diseases can be managed simultaneously, as may be required in 25% of cases. The EnDCR often requires septal or turbinate surgery to optimize access to the lacrimal area. The incidence of concomitant procedures in a study showed that 35% of patients needed septoplasty, and 19% had additional endoscopic sinus surgery.² We hereby report a revision EnDCR using cold steel tools with powered drills under loco-regional anaesthesia in an unfit elderly patient with chronic excessive tearing due to chronic dacryocystitis.

NASAL INVERTED PAPILLOMA WITH UNUSUAL ORIGIN

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Two cases of Schneiderian papilloma of the nasal septum are presented. The condition is rare, as indicated by a review of previously published cases. The clinical course of the lesion suggests that it behaves like Schneiderian papillomas elsewhere in the nasal cavity and paranasal sinuses. The need for aggressive surgical management and careful follow-up is emphasized.

KEY WORDS : Nasal septum -Schneiderian Papillomas

INFANTILE ORBITAL LYMPHANGIOMA WITH A RARE ENT PRESENTATION

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We are reporting a rare case of 22-year-old Malay female with history of left orbital swelling which was noted since the age of 2 month and treated conservatively. Four years later noted the swelling increase gradually in size involving the bridge of the nose associated with proptosis and left intermittent epistaxis. Examination revealed a soft and boggy swelling at the medial canthus of the left orbit extending to the nasal bridge with mild proptosis. Left intranasal endoscopic examination revealed hemorrhagic spots at the septum with bulging at the lateral wall of the nose and intact mucosa. The radiological examinations with biopsy were consistent with lymphangioma of the left orbit. Orbital Lymphangiomas are rare and it is not reported to present with recurrent epistaxis.

A CASE OF ACUTE SINUSITIS WITH INTRACRANIAL AND INTRA-ORBITAL COMPLICATIONS

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Nowadays the incidence of orbital and intra cranial complications of the sinusitis is rare and the simultaneous occurrence of both complications is more seldom, and it can be lethal. We present a case of 14-year-old boy who presented with fever, headache, right eye swelling, proptosis and impaired vision. On computed tomography right pan-sinusitis, right subperiosteal orbital abscess and subdural empyema noted. Intravenous antibiotic started. Intracranial empyema evacuation and sinus wash out followed by endoscopic sinus surgery were done. Although after invention of antibiotics the incidence of serious complications of sinusitis is rare still it may be seen in casualty and daily clinic. Admission and aggressive medical management including broad-spectrum antibiotics and surgical intervention to drain the sinuses should be taken immediately

COMBINATION ENDOSCOPY AND LE FORT I OSTEOTOMY APPROACH FOR ADVANCED NASOPHARYNGEAL ANGIOFIBROMA WITH INTRACRANIAL EXTENSION : A CASE REPORT

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Angiofibromas are the most common benign tumor of the nasopharynx and intracranial extension has been reported in approximately 20-25% of cases. The incidence of recurrence after surgery are between 22% and 37% and may be as high as 55% depending on the staging of the tumors. The combination of Endoscopic and Le Fort 1 osteotomy approach is a useful technique for the removal of extensive intranasal angiofibroma which has invaded the pterygopalatine, infratemporal fossa and intracranial cavity.

We present a young boy with history of persistent nasal blockage and severe epistaxis. Endoscopic examination revealed a significant vascular mass occupying the whole nasal cavity which bled on manipulation. Imaging done showed an intranasal mass which occupied the nasal cavity and extended into pterygopalatine and infratemporal fossa, cavernous sinus and also extradural intracranial cavity. Combined approach of Endoscopy and Le Fort 1 Osteotomy was done to clear the aggressive vascular mass. Post operative imaging showed that the affected areas were clean from the mass.

As a conclusion, the Le Fort 1 osteotomy has been adopted as a surgical approach in the management of advanced and some cases of residual angiofibromas which provided excellent exposure especially when combined with endoscopy.

ALLERGIC SKIN PRICK TESTING - A 4 YEAR EXPERIENCE IN HOSPITAL AMPANG

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INTRODUCTION : Allergy skin prick test is widely used to demonstrate an IgE-mediated allergic reaction of the skin. It is a useful diagnostic tool in determining specific allergy towards aerosol, contact or food allergens in atopic individuals. It is cheap, rapid and with practice and adherence to a few simple guidelines produce highly reproducible results. This study was carried out to determine the prevalence of sensitization to common allergens among the patient who attended allergy clinic in ORL Department Hospital Ampang.

MATERIALS AND METHODS : Patient aged 10 years and above under ORL clinic follow up for allergic rhinitis, whose symptoms were poorly controlled were sent for allergy skin prick testing (SPT). Patients underwent SPT from January 2009 till December 2012 were included in the study. Patients were instructed not to take anti-histamine 10 days prior to the test. Two sets of allergens were used in our centre; GERMAX which is commercially available and allergens from Institute of Medical Research (IMR), which was extract of local allergens. The allergens that were used in the SPT in our centre were aeroallergens, food allergens and contact allergens. The data were collected and analysis of age of the patients, gender, racial distributions and sensitization were done.

RESULT : A total number to 239 patients attended SPT from January 2009 till December 2012. Ninety five point eight percent of patients showed positive SPT result. Most of the patients were between 12 to 20 years old (33.89%), and 166 patients (69.5%) were Malay, followed by Chinese (18.83%), Indian (10.87%) and others (0.84%). The male to female ratio was 1:1.5. A total of 802 sensitizations were noted with 56.98% sensitized to aeroallergen, 42.39% and 0.63% sensitized to food and contact allergen respectively. The commonest aeroallergens sensitized in this study were *Dermatophagoides farinae* (34.8%), followed by *Blomia tropicalis* (32.6%). Prawn (17.94%) and crab (17.05%) were the commonest food allergen sensitized.

CONCLUSION : Sensitization to aeroallergen is common compared to the food and contact allergen. Perhaps this data will represent the most common allergen sensitization in urban area; with house dust mites represent the commonest allergen sensitized.

A RARE CASE OF SINONASAL ANGIOSARCOMA

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OBJECTIVE : To highlight the rarity of presentation of angiosarcoma involving sinonasal region in Asian community.

CASE REPORT : A 52-year-old male presented with persistent left nasal blockage for one year duration. Examination noted left nasal cavity was occupied by pinkish mass, which was partially polypoidal and did not bleed on probing. Second biopsy revealed sinonasal angiofibroma. Angiosarcoma is a rapidly growing malignant tumour of endothelial cells which is characterized by the formation of irregular vascular channels lined with atypical endothelial cells. It represents 2% of all sarcomas and only about 1-4% is seen in the region of aerodigestive tract. Angiosarcoma of the head and neck most commonly involves the skin of the scalp or face but primary involvement of the sinonasal region is rare.

CONCLUSION : Angiosarcoma involving sinonasal cavity is extremely rare, and because of this, a proper guidelines on its management is difficult to be made.

PEDIATRIC VOCAL CORD PARALYSIS : A MANAGEMENT REVIEW

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OBJECTIVES : Vocal Cord Palsy is the second most common cause of neonatal stridor, reported to account for 10% of all congenital laryngeal anomalies. The treatment depends primarily on the extent of airway compromise and presence of associated laryngeal pathologies. A review on its management as well as varied aetiology and presentation was made.

METHOD : A retrospective review of 19 cases of paediatric vocal cord palsy in Hospital Sultanah Bahiyah

RESULTS : The age group ranges from day 1 of life till 13 year old. Nine cases had bilateral abductor palsy while nine had unilateral abductor palsy. Of the bilateral cases, one had Arnold Chiari Malformation in whom stridor and vocal cord movement improved with posterior fossa decompression while one was an ex-premature with communicating hydrocephalus. Five cases underwent laser cordectomy in whom four of them had prior tracheostomy done for severe airway obstruction. One case had tracheostomy decannulated prior to laser cordectomy. Seven of the unilateral cases were managed conservatively. One case with obstructive sleep apnoea, cor-pulmonale and subglottic stenosis had a tracheostomy while another unilateral case was a boy with VATER, tracheoesophageal fistula and chronic lung disease, was also tracheostomized

CONCLUSION : Management option and its urgency depends on symptom severity which in turn depends on type of palsy, unilateral or bilateral and other associated airway pathologies. There is a paradigm shift towards an earlier laser cordectomy for bilateral abductor palsy to avoid or decannulate tracheostomy

DIAGNOSTIC FLEXIBLE AIRWAY ENDOSCOPY IN PAEDIATRIC INTENSIVE CARE SETTING: AN ANALYSIS OF 109 EXAMINATIONS IN HTAA, KUANTAN

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OBJECTIVES : We analysed the flexible airway endoscopy performed in the paediatric intensive care unit of Hospital Tg Ampuan Afzan (HTAA), Kuantan, over a period of 6 years.

METHODS : Retrospective analysis of all the cases of flexible airway endoscopy performed in the paediatric ICU of HTAA from 2007 to 2012. All the procedures were done under topical anaesthesia, with or without intravenous sedation.

RESULTS : In this period, we performed 109 endoscopic investigations in 99 patients (aged 1 day-9 yrs) in the Paediatric ICU setting. Three different size flexible endoscopes were used to perform 97 laryngoscopic procedures and 12 bronchoscopic procedures. Repeat procedures were performed in 10 children. The most common indications for diagnostic endoscopy were stridor (76.1%), stertor (11%), chronic cough (5.5%), hoarseness (4.6%), and non-specific chest x-ray changes (2.8%). Laryngomalacia (71 cases) was the commonest diagnosis, which was the cause for 85.5% of stridor. Tracheobronchomalacia (9), subglottic stenosis (8) and obstructing adenoid tissue (4) were the next most common diagnoses. In addition, granulation tissue (3), vocal cord palsy (3), endobronchial foreign body (2), laryngeal tuberculosis (2), laryngeal hemangioma (1), laryngeal cleft (1), subglottic cyst(1) and pulmonary hemosiderosis(1) were other diagnosis found. Findings were normal in 3 (2.8%) cases. Diagnostic information was obtained in 94 of 99 patients. The diagnostic yield was highest in patients with stridor, and in patients with a tracheostomy. Minor complications occurred in altogether 4 cases; all were completely and rapidly reversible. Morbidity was minimal, and there was no death related to the procedure.

CONCLUSIONS : Flexible fiberoptic bronchoscopy under sedation is a safe and valuable diagnostic tool. The procedure can be done in the ICU setting for critically ill pediatric patients in whom evaluation of the airway in the operating room under general anesthesia would have been difficult.

KEYWORDS : Pediatrics, intensive care, laryngoscopy, bronchoscopy, diagnostic

AIRWAY OBSTRUCTION SECONDARY TO CONGENITAL VALLECULAR CYST : WHEN SHOULD WE INTERVENE?

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Congenital vallecular cyst is a rare cause of congenital stridor. It is benign and usually present at the lingual surface of the epiglottis. When present, it may account for severe inspiratory stridor that compromise the airway. The high incidence of laryngomalacia as the cause of congenital stridor should not obscure the clinician to have a high level of suspicion towards this condition where early and timely intervention is needed to ensure a better outcome. The accepted gold standard treatment is direct laryngoscopy with marsupialization of the cyst to prevent recurrence. Three cases of congenital vallecular cyst in our centre are described here. Although all cases presented differently, we were able to achieve good outcome with timely intervention after the case being referred to our institution.

QUALITY OF LIFE AFTER ADENOTONSILLECTOMY IN CHILDREN WITH SLEEP-DISORDERED BREATHING

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OBJECTIVES : To study changes in quality of life after adenotonsillectomy (AT) in children with sleep-disordered breathing (SDB), and to elucidate discrepancies in life quality changes after AT in SDB children with different gender, age, adiposity and disease severity.

METHODS : Children aged 2 to 18 years were recruited. All the children had SDB-related symptoms and preoperative full-night polysomnography (PSG). Caregivers were asked to complete the first OSA-18 survey prior to AT, and the second OSA-18 survey within 3 months after surgery. The disease severity were defined as primary snoring (AHI<1), mild obstructive sleep apnea (OSA) (1<AHI<5), and moderate-to-severe OSA (AHI>5). Discrepancies in OSA-18 score changes after AT in different groups were tested using linear mixed model.

RESULTS : A total of 171 children were included (mean age, 7.3±3.5 years; 76% boys).

The OSA-18 total score changes after AT were not significantly differed by gender (boys vs. girls, P=0.244), age groups (>7 years vs. <7 years, P=0.867), or adiposity (obese vs. non-obese, P=0.608). The OSA-18 total score changes after AT were differed by disease severity (primary snoring vs. moderate-to-severe OSA, P=0.006; mild OSA vs. moderate-to-severe OSA, P=0.001). Children with moderate-to-severe OSA had greater OSA-18 total score changes after AT than children with mild OSA or primary snoring.

CONCLUSIONS : Children with SDB had a quality of life improvement after AT, as documented by OSA-18 score changes. Quality of life after AT in SDB children was better improved in more severe form of disease, and not affected by gender, age, or adiposity.

KEYWORDS : Child; Polysomnography; Quality of Life; Sleep Apnea, Obstructive

TECHNIQUES AND TROUBLE SHOOTING FOR REMOVAL OF PAEDIATRIC ASPIRATED FOREIGN BODY

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INTRODUCTION AND OBJECTIVE : Removal of aspirated tracheobronchial foreign bodies by bronchoscopy can be difficult and challenging. The techniques and instruments used may differ depending on the type, shape and consistency of the foreign body. The objective of this study is to review the different instruments and techniques used in removal of aspirated foreign bodies.

PATIENTS AND METHODS : We retrospectively reviewed all patients who have had endoscopic removal of tracheobronchial foreign bodies from year 2008. We looked at the techniques and instruments used for each for body retrieval.

RESULTS : Instruments used in every case differ depending on the type of foreign body and where it lodges in the tracheobronchial tree.

CONCLUSION : Bronchoscopic removal of aspirated foreign body is a safe method. Flexible fibre-optic bronchoscope, optic graspers, Dormian basket and Fogarty Balloon Catheter can assist in the removal of difficult and impacted foreign bodies.

INFANT WITH SUDDEN, LARGE, POST-INTUBATION SUBGLOTTIC CYST

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OBJECTIVE : Subglottic cyst in infancy is almost always associated with episodes of early life intubation. Most cases typically presented late, usually days to months after endotracheal extubation. We report a case of a subglottic cyst with different presentation than the norm.

CASE DESCRIPTION : A prematurely born, four-month-old baby girl was on a ventilator via the endotracheal tube for four days after diagnosed with severe pneumoniae. She presented with stridor, two hours after airway extubation. Her conditions deteriorated, needing reintubation. However, laryngoscopy showed a large subglottic cyst totally obstructing the airway. As an attempt to intubate failed, a tracheostomy was performed and the cyst was marsupialized under general anesthesia. Patient was decannulated three weeks later.

CONCLUSION : This case highlights that subglottic cyst can present acutely, and rapidly enlarging soon after the airway extubation. As the management of a large subglottic cyst can be challenging, a close observation for early diagnosis and intervention are recommended post extubation in the high-risk cases, such as in the premature infant.

KEYWORDS : subglottic cyst, acquired cyst, premature infant, endotracheal intubation, airway obstruction

PEDIATRIC TRACHEOSTOMY : A REVIEW IN 6 YEARS

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Tracheostomy in pediatric age group is associated with higher morbidity and mortality compared to adult. With the improvement of pediatric intensive care and medical management, this will increase the survival rate of infants including the premature. This will also increase the number of tracheostomy performed.

OBJECTIVE : To study the indications and outcomes of pediatric tracheostomy.

METHODS : A retrospective review of hospital records from January 2006 to June 2012 was conducted to assess the patients who undergone tracheostomy.

RESULTS : A total of 65 tracheostomies were performed. The age ranges from 3 hours of life till 17 years of age. The patients were divided into 2 groups, based on the age of patient at the time of tracheostomy. The indication for tracheostomy to patients aged less than 1 year is upper airway obstruction. Prolonged ventilation is the main reason to patient aged above 1 year old till 17 years old. Some procedures need to be done to some patients prior to decanulation such as laryngotracheal reconstruction, subglottic/tracheal dilatation and laser cordectomy. There was no tracheostomy related mortality.

CONCLUSION : Tracheostomy is a safe and a lifesaving procedure. It is safe when performed by a trained team, in collaboration with pediatric intensive care and anaesthetic support. It is mainly performed to patients with upper airway obstruction. The outcome of the tracheostomy depends on the initial indication.

ACUTE EXACERBATION OF BRONCHIAL ASTHMA AND RECURRENT UPPER LOBE COLLAPSE : A CASE REPORT

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A 3-year-old Malay girl presented with non productive cough, rhinorrhoea, fever and shortness of breath for 3 days duration. There was no cyanotic episodes, stridor nor choking with foreign body. On examination, she was in mild respiratory distress with subcostal recession. The air entry was reduced over the right upper lobe with occasional rhonchi. She was diagnosed to have acute exacerbation of bronchial asthma secondary to bronchopneumonia with right upper lobe collapse. She recovered well with treatment and the right upper lobe fully expanded. Subsequently, she had multiple admissions for similar problem. Bronchoscopy was performed to evaluate the airway. The findings and discussion is reviewed.

INNER EAR AND VESTIBULOCOCHLEAR NERVE ABNORMALITY IN CONGENITAL HEARING LOSS : HOSPITAL SULTANAH BAHYIAH EXPERIENCE

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Cochlear implant service in Malaysia had received support and encouragement from The Ministry of Health since 2006. Since then, hundreds of patients benefited from this programme especially among pediatric age groups with congenital sensorineural hearing loss. Hospital Sultanah Bahiyah is one of the satellite centre in the northern region for the National cochlear implant programme.

The objective of this study is to evaluate the inner ear and vestibulocochlear nerve pathology among children investigated radiologically as part of the cochlear implant candidacy assessment.

This is a retrospective study of hearing impaired children in ORL Department Hospital Sultanah Bahiyah from the year 2009 to 2013.

A total of 46 cases were included and statistically analysed. 19.6% of children had inner ear abnormalities namely bilateral Mondini malformation (8.7%), bilateral dysplastic or maldevelopment of cochlea (4.4%), bilateral enlarged vestibular aqueduct (2.2%) and absent of cochlea (2.2%). 8.7% had vestibulocochlear nerve abnormality i.e. hypoplastic nerve (6.5%) and nerve aplasia (2.2%). One case had concomitant abnormal inner ear structure and cochlear nerve aplasia.

In conclusion, inner ear and vestibulocochlear nerve abnormalities are present in a proportion of children with congenital sensorineural hearing loss. They are among the important determining factors for the feasibility of cochlea implant.

PREVALENCE OF COCHLEAR DYSFUNCTION IN TERM-APPROPRIATE FOR GESTATIONAL AGE NEONATES AT DR CIPTO MANGUNKUSUMO HOSPITAL POST AMINOGLYCOSIDES THERAPY

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OBJECTIVE : To determine the prevalence of cochlear dysfunction in term-appropriate for gestational age neonates at Dr. Cipto Mangunkusumo Hospital post aminoglycosides therapy and to investigate cochlear function improvement in neonates after the aminoglycosides therapy was discontinued.

METHODS : This is a descriptive-cohort prospective pre-eliminatory study. Forty term-appropriate for gestational age neonates who had aminoglycosides therapy were consecutively recruited from Perinatology Division Pediatric Departement at Dr. Cipto Mangunkusumo Hospital, Jakarta between April – August 2010. All neonates were assessed through 3 times DPOAE examinations using 6 frequencies (2000 Hz, 4000 Hz, 6000 Hz, 8000 Hz, 10.000 Hz, 12.000 Hz). The result was considered normal when the newborn showed signal to noise ratio ≥ 6 in all frequencies. Results: The prevalence of cochlear dysfunction was 25%, of which 7,5% was unilateral and 17,5% bilateral. After the aminoglycosides therapy was discontinued, only 72,5% neonates complete the 3rd DPOAE examination. Three subjects had cochlear function improvement, 1 subject had permanent cochlear dysfunction, 2 subjects showed both improvement and deterioration in each side of the ear. Two subjects had delayed cochlear dysfunction which occur in the 3rd DPOAE examination.

CONCLUSIONS : The prevalence of cochlear dysfunction post aminoglycosides therapy using DPOAE was high. Some neonates showed complete cochlear function improvement after the aminoglycosides therapy was discontinued.

A NEWBORN WITH INFECTED CYSTIC HYGROMA COMPLICATED WITH POSTOPERATIVE VOCAL CORD PALSY AND GASTROESOPHAGEAL REFLUX DISEASE

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Cystic hygroma is a congenital abnormality, often occurs in the head and neck area (approximately 75%) with left sided predilection. The incidence of cystic hygroma is 1 in 6000 – 16000 live births. It may not be found at birth and it grows when the baby grows. 50-65% are evident at birth with 80-90% are presented at the age of 2 years.

The incidence of cystic hygroma with retropharyngeal extension and respiratory obstruction and swallowing difficulty in neonate is rarely reported. Complete resection is the best choice of treatment.

We present a case of day-2 of life baby with left cystic hygroma and retropharyngeal extension to right. Excision was performed at day 13 of life, but complicated with postoperative vocal cord palsy and gastroesophagus reflux. She was treated conservatively and gradually improved over few months.

CONGENITAL PHARYNGEAL TERATOMA; A SPECTRUM OF PAEDIATRIC UPPER AIRWAY MANIFESTATION

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INTRODUCTION : Congenital teratomas are tumours derived from pluripotent cells from two or more germ layers with an incidence of 1 in 4,000 live births. Head and neck teratoma comprises less than 10% of cases with naso/oropharyngeal lesions being the rarest. They usually present with varying spectrum of upper airway obstruction.

METHODS : A retrospective review of four cases of paediatric naso/oropharyngeal teratoma encountered in Hospital Sultanah Bahiyah and Hospital Langkawi was made

RESULTS : One case was diagnosed intrauterine to have a large oropharyngeal mass, delivered via EXIT procedure at 33 weeks of gestation. Two cases were diagnosed at neonatal period. One of them was referred at day 4 of life for grunting and was intubated for CO₂ retention. Findings of lobulated soft tissue mass, attached to vomer posteriorly, obliterating both posterior choana, histologically confirmed as mature cystic teratoma. Another newborn was intubated at 1 hour of life for persistent tachypnoea and O₂ desaturation. There was a pedunculated solid mass, arising from inferior portion of left Eustachian tube cushion confirmed to be hairy polyp. The fourth case is a 6 yr old girl with Turner Syndrome, obesity, obstructive sleep apnoea and adenotonsillar hypertrophy. An accidental finding of pedunculated mass in the nasopharynx attached to the posterior surface of soft palate on the left was found during adenotonsillectomy.

CONCLUSION : Surgery is an urgent management option for pharyngeal teratoma causing upper airway obstruction.

SPONTANEOUS DRAINAGE OF RETROPHARYNGEAL ABSCESS IN CHILDREN

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Retropharyngeal abscesses are deep neck infections encountered more commonly in paediatric age group that can pose a life threatening emergency due to its potential to cause airway compromise. Other complications are due to spread of infection to other neck spaces. Rupture of abscess in the pharyngeal area can cause aspiration of pus, resulting in asphyxiation or pneumonia.

We are presenting two cases of retropharyngeal abscess complicated by spontaneous rupture of abscess in the oropharynx. Both patients presented in Accident and Emergency Department of a tertiary hospital with several days history of sore throat accompanied by high grade fever and gradually developing neck swelling. Lateral neck x-rays for both patients are highly suggestive of retropharyngeal infection with possible abscess formation. One of the patients had formal drainage of the abscess and high dose parenteral antibiotics. The other patient had high dose parenteral antibiotics only. Both patients remained stable and showed clinical improvement while in the ward. Both patients were discharged home well. No recurrence of the retropharyngeal abscess was noted on subsequent follow-ups.

Spontaneous drainage of retropharyngeal abscess is not a common occurrence. It can happen quietly or may lead to catastrophic conditions such as aspiration pneumonia and asphyxiation, especially in younger age group

NASOPHARYNGEAL HAIRY POLYP AS A RARE CAUSE OF NEONATAL RESPIRATORY DISTRESS

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Hairy polyps are rare developmental malformations. They are benign lesions presented as a pedunculated mass that may arise from the naso-oropharyngeal region. Larger mass can cause upper respiratory obstruction causing respiratory distress or feeding difficulty, while smaller mass will present as intermittent respiratory distress due to a ball-valve type of obstruction. They are commonly seen in female, with ratio of 6:1 and majority of the cases occur in the infantile period. We report a case of female infant who presented with intermittent respiratory distress. The lesion was finally diagnosed as nasopharyngeal hairy polyp.

NASOPHARYNGEAL CARCINOMA IN PEDIATRICS

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Nasopharyngeal malignancies in pediatrics are rare. The most common malignancy in adults is nasopharyngeal carcinoma however in pediatric it can be lymphoma, carcinoma, rhabdomyosarcoma or teratoma.

OBJECTIVES : To review the clinical presentations, the histological report, radiological findings and the outcome of NPC in pediatric age group

METHODOLOGY : Retrospective review of pediatric patients diagnosed with nasopharyngeal carcinoma in Hospital Sultan Abdul Halim, Sungai Petani, Kedah, Malaysia from 2002 till 2013 was performed.

SUMMARY : There were 5 patients diagnosed with NPC, the age ranges from 11 to 17 years of age. Nasal symptoms were not common which occur in 3 patients, 2 patients presented with trismus but all patients had neck lymphadenopathy. Two patients had intracranial extension. Three patients were diagnosed as WHO type III and 2 patients with WHO type II nasopharyngeal carcinoma. There were 2 patients with bone metastasis post chemoradiotherapy succumb to the disease.

CONCLUSIONS : The nasopharyngeal carcinoma is rare among pediatric age group. In our review, cervical lymphadenopathy is the commonest presenting symptoms. Histological classification WHO type II classification has a poorer prognosis than WHO Type III.

MANAGEMENT OF A SPHENOID ARTERIOVENOUS MALFORMATION IN A CHILD

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A four year old Chinese boy was found to have a sphenoid arteriovenous malformation. He presented with right eye swelling and redness for duration of one month. Clinical examination revealed right proptosis, periorbital oedema and erythema, and a temporal swelling. Imaging studies showed an arteriovenous malformation of the sphenoid sinus, measuring 4.1 x 4.6 x 3.7 cm. There was mass effect on the right globe, with the lesion abutting the left optic nerve.

The case was discussed at a multidisciplinary tumour board meeting and decided against surgical intervention. The patient underwent three angioembolisation procedures, with good reduction of flow through feeders from the right external carotid arteries. The size of the arteriovenous malformation reduced in its cranio-caudal extent and remained stable five months post-angioembolisation.

Propranolol treatment was also initiated at 0.25 mg/kg/day in three divided doses, and subsequently increased to 2 mg/kg/day in three divided doses. The patient was scheduled for a repeat scan, after being on the target dose for three months, and was hoped to respond positively to this therapy.

Acknowledgements

The Organising Committee of the
4th Asian Paediatric Otorhinolaryngology Congress & 5th Malaysian International ORL-HNS Congress
in conjunction with
33rd Annual General Meeting of the Malaysian Society of Otorhinolaryngologists – Head and Neck Surgeons
express its deep appreciation to the following for their support and contribution to the success of the conference:

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