

ABSTRACT BOOK

PUSTAKA KAMPUS KESIHATAN
UNIVERSITI SAINS MALAYSIA



RUJUKAN
RSCM

2nd

ASIAN PEDIATRIC ENT MEETING

5-7 March 2009

Gran Melia Hotel, Jakarta Indonesia

Post meeting Course & Workshop

1. 5th Jakarta International FESS Course & Workshop with Balloon Sinuplasty Training
2. Snoring & OSA Course – Focus on Pediatric Cases
3. Rhinitis – Asthma Management
4. Update Management of Newborn & Pediatric Hearing Loss



Dr. Suzanne Steikh Ab. Hamid

Paediatric Laryngotracheal Cases Universiti Sains Malaysia Experience

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Malaysia

There are many inherent challenges in the evaluation and management of children with laryngotracheal disorders, and differ widely from one institution to another. The main challenges include access to suitable equipment, fully trained surgeon and, cooperation with the anaesthetist and paediatrician. During the past five years great advances have been made in managing paediatric airway cases in the Department of Otorhinolaryngology-Head & Neck Surgery at Universiti Sains Malaysia. The paediatric laryngotracheal cases undergoing microlaryngoscopy and bronchoscopy from 2004 to 2008 are presented. More than 80 cases have been reviewed. The most commonly presenting symptom was stridor. Other reasons for referral were laryngotracheal stenosis, foreign body inhalation, unresolved lung disease, failed extubation, examination prior to decannulation and hoarseness. Interventions were varied and tailored to each problem. The management include observation, medical treatment, closed (endoscopic) techniques and open surgery.

Keyword : Paediatric Laryngotracheal; Laryngotracheal disorder; Malaysia; Microlaryngoscopy; Bronchoscopy

Paediatric Laryngotracheal Cases – Universiti Sains Malaysia Experience

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Introduction

- There are many inherent challenges in the evaluation and management of children with laryngotracheal disorders, and differ widely from one institution to another.
- The main challenges include access to suitable equipment, fully trained surgeon and, cooperation with the anaesthetist and paediatrician.



Introduction

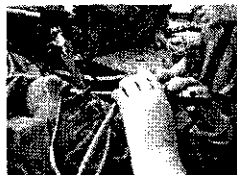
- During the past five years great advances have been made in managing paediatric airway cases in the Department of Otorhinolaryngology-Head & Neck Surgery (ORL-HNS) at Universiti Sains Malaysia (USM).
- Aim – to conduct a retrospective analysis of endoscopy results in children with laryngotracheal disorders

Methods

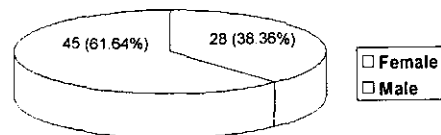
- Retrospective review of case notes of paediatric cases (less than 12 years old) underwent direct laryngoscopy and tracheobronchoscopy under general anaesthesia (elective cases) between January 2004 and December 2008 at the Department of ORL-HNS, USM.
- Data obtained from the medical files included age (when first seen by the ORL-HNS surgeon), gender, indication & results of endoscopy.

Results

- During the study period 73 children (complete medical files) underwent direct laryngoscopy and tracheobronchoscopy
- Mean age = 30 months



Gender distribution



Reason	Total (%)	Endoscopy results	N (%)
Hoarseness	4 (8.8)	Vocal cord nodule Normal findings	3 (4.1) 1 (1.4)
Noisy respiration	37 (60.7)	Laryngomalacia Acquired subglottic stenosis Laryngoedema Suprastomal granulation tissue Congenital subglottic stenosis Mucous plug Subglottic haemangioma Vocal cord haemangioma Tracheomalacia with teratoma Macroglossia Vocal cord palsy Normal findings	12 (16.4) 9 (11.0) 5 (6.9) 2 (2.7) 1 (1.4) 2 (2.7) 1 (1.4) 1 (1.4) 1 (1.4) 1 (1.4) 1 (1.4) 2 (2.7) 3 (4.1)
Aspiration	4 (8.5)	GERD Normal findings	1 (1.4) 3 (4.1)
Lung collapse	11 (16.1)	Mucous plug Obilitation right main bronchus Granulation tissue left main bronchus (TB)	6 (8.2) 1 (1.4) 1 (1.4)
Difficulty in breathing	4 (5.5)	Laryngomalacia Congenital subglottic stenosis Respiratory papillomatosis Suprastomal granulation tissue	1 (1.4) 1 (1.4) 1 (1.4) 1 (1.4)
Choking	8 (9.2)	Foreign body No foreign body seen	3 (4.1) 3 (4.1)
Prior to wean off tracheostomy	8 (6.3)	Suprastomal granulation tissue Acquired subglottic stenosis Vocal cord palsy with granuloma	3 (4.1) 1 (1.4) 1 (1.4)
Prolonged intubation	2 (2.7)	Suprastomal granulation tissue	2 (2.7)

- Not all cases with:
 - noisy respiration
 - clinically diagnosed laryngomalacia
 - syndromic child
- underwent direct laryngoscopy & tracheobronchoscopy under general anaesthesia
- Some cases underwent the procedure more than once

Results of endoscopy	Age range at presentation						Total N (%)
	1 d	2 to 7 d	8 to 28 d	29 d to 1 yr	1 to 5 yr	>5 yr	
*Laryngomalacia	1	2	1	8	0	0	12 (16.4)
*Congenital subglottic stenosis	1	0	0	1	0	0	2 (2.7)
Acquired subglottic stenosis	0	0	0	6	3	1	9 (12.3)
Vocal cord nodule	0	0	0	0	1	2	3 (4.1)
Vocal cord haemangioma	0	1	0	0	0	0	1 (1.4)
*Subglottic haemangioma	0	0	0	1	0	0	1 (1.4)
*Tracheomalacia with teratoma	0	0	0	1	0	0	1 (1.4)
Vocal cord palsy	0	0	0	1	0	0	1 (1.4)
Vocal cord palsy & granuloma	0	0	0	0	0	1	1 (1.4)
Macroglossia	0	0	0	0	1	0	1 (1.4)
Laryngoedema	0	0	2	1	2	0	5 (6.9)
Suprastomal granulation tissue	0	0	0	3	0	5	8 (11)
Mucous plug	1	0	0	4	2	1	8 (11)
Foreign body	0	0	0	2	2	2	6 (8.2)
Obilitation of Rt main bronchus	0	0	0	0	1	0	1 (1.4)
Respiratory papillomatosis	0	0	0	0	1	0	1 (1.4)
GERD	0	0	0	1	0	0	1 (1.4)
Normal findings	0	0	0	7	2	1	11 (15.1)

Distribution of children with laryngomalacia presented with severe respiratory distress in age groups

Age range	N	%
1 day	1	8.3
2 to 7 days	2	16.7
8 to 28 days	1	8.3
29 days to 1 year	8	66.7
Total	12	100

Symptoms usually absent at birth, begin within first few weeks of life, increase over several months, resolve by 18-24 months of life.


Age at presentation of children with congenital subglottic stenosis

Age range	N
*1 day	1
2 to 7 days	0
8 to 28 days	0
**29 days to 1 year	1
Total	2

*Severe respiratory distress at birth, unable to intubate, emergency tracheostomy
**Infectious laryngotracheobronchitis

Results

- Non syndromic - 60 (82.19%)
- Syndromic - 13 (17.81%)





Syndromic cases

Syndrome	N	Diagnosis	Total N (%)
Down	1	Laryngomalacia	5 (38.48)
	1	Acq subglottic stenosis	
	3	Normal findings	
Dandy Walker	1	Laryngomalacia	2 (15.40)
	1	Mucous plug	
Pierre-Robin	1	Suprastoma granulation tissue	1 (7.69)
Cri-Du-Cat	1	Laryngomalacia	1 (7.69)
Prader Willi	1	Suprastomal granulation tissue	1 (7.69)
Di George	1	Acquired subglottic stenosis	1 (7.69)
Spinal Muscular Dystrophy	1	Mucous plug	1 (7.69)
Beckwith-Wiedemann	1	Suprastoma granulation tissue & Macroglossia	1 (7.69)

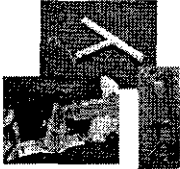



Intubation-related complication

Endoscopy findings	N (%)
Acquired subglottic stenosis	9 (50.0)
Laryngoedema	8 (44.4)
Vocal cord palsy & granuloma	1 (5.6)
Total	18 (100)


Tracheostomy-related complication

Reason for endoscopy	N (%)	Granulation tissue [n (%)]
On tracheostomy/T-tube/stent	21 (28.8)	8 (38.1%)

Associated with lung diseases

Clinical features	N (%)	With mucous plug [n (%)]
Recurrent pneumonia	10 (13.7)	2 (20.0)
Lung collapse	14 (19.2)	8 (57.1)
Total	24 (32.9)	10 (41.7)




Treatment

- Interventions were varied and tailored to each problem.
- The management include observation, medical treatment, closed (endoscopic) techniques and open surgery.

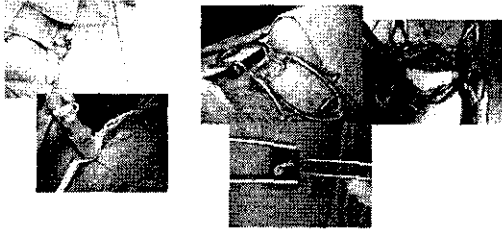
Treatment

- Observation**- severity of respiratory distress, growth, feeding
- Medical treatment**- Mitomycin-C, systemic steroid
- Closed (endoscopic) techniques**- laser/incision & dilatation, debridement, aryepiglottoplasty, suction

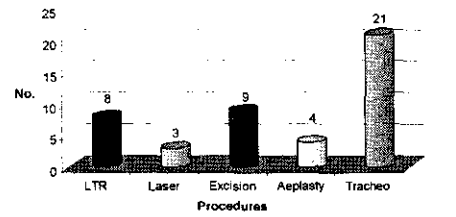


Treatment

- Open surgery- tracheostomy, laryngotracheal reconstruction with anterior graft

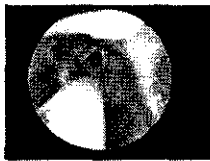


Types of procedure



Treatment

- Laryngomalacia
 - Aryepiglottoplasty = 4
 - Observation = 8



Treatment

- Subglottic stenosis
 - Congenital = 2; LTR = 2 (abnormal shape & generalised thickening of the laminae)
 - Acquired = 9;
 - LTR = 6, Laser = 2, incision & dilatation = 1



Conclusion

- The most commonly presenting symptom was noisy respiration.
- In tertiary referral for paediatric ORL-HNS – more complex diseases are usually seen, laryngeal intubation- & tracheostomy-related complications are the main causes of stridor.
- Endoscopy when indicated should be detailed & carefully done.

Thank you

PROGRAM AT A GLANCE

	DAY 1 Thursday, 5th March 2009	DAY 2, Friday, 6th March 2009	DAY 3, Saturday 7th March 2009
07.00 - 08.00	REGISTRATION	REGISTRATION	REGISTRATION
08.00 - 09.30	OPENING CEREMONY & SPEECHES	MEET THE EXPERT: PEDIATRICIAN - ORL PERSPECTIVE Giving Antibiotics Or Not Giving Antibiotics In Acute ENT Infection	MEET THE EXPERT: - ORL PERSPECTIVE Tonsillectomy & Adenoidectomy: Indication & Timing
09.30 - 10.30	KEYNOTE SPEAKER 1. Establishing Pediatric ENT Subdisciplines in ORL-HNS Medical 2. Multidisciplinary Approach in Managing Pediatric Snoring and OSA 3. Pediatric Noise Induced Hearing Loss	PLENARY 1 1. Current Treatment in Choanal Atresia 2. Characteristics & Management of Pediatric Otitis Media in Asian Countries 3. CSOM With Cholesteatom & Hearing Complication In Children	PLENARY 2 1. Management Airway Obstruction in Neonatal & Children 2. Selective Bronchial Lavage For Neonatal Pulmonary Atelectasis 3. Sensorineural Deafness in Inborn Error of Metabolism
10.30 - 10.45	COFFEE BREAK	COFFEE BREAK	COFFEE BREAK
10.45 - 12.15	MORNING SYMPOSIUM	MORNING SYMPOSIUM	MORNING SYMPOSIUM
	MS1 Airway	MS3 Oncology	MS5 Congenital Anomalies
	MS2 Ear & Hearing	MS4 Abbott	MS6 Airway
	1. Management Of Airway Obstruction In Daily Practice 2. Overview Of The	1. Pediatric ENT Cancer 2. NPC In Children 3. Non Surgical Management In Pediatric	1. Sinobronchitis in Children - I Budiman (Ina) 2. Latre Buntaran (Ina) 3. Darmawan B. Setyanto (Ina)
	1. Malaysian Statistics of OME 2. Auditory Neuropathy In Infants And Young		1. Lip& Nose Management in Labiopalatognat oschizis 2. Upper Airway Management In Post ENT
			1. Tracheolaryngomalacia: 2. Supraglottoplasty For Treatment Of Severe Laryngomalacia 3. Tracheostomy In PICU 4. Hospital Sains Malaysia Experience

	<p>Management Recurrent Respiratory Papillomatosis In Cipto Mangunkusumo Hospital</p> <p>3. Medical Management Of Laryngitis Diphteria</p>	<p>Children - Clinical Findings & Management</p> <p>3. Role of BERA On Delayed Speech</p> <p>4. Hearing Complication In Neonatal Jaundice</p>	<p>Hemorrhage</p> <p>4. Nutritional Approach In Pediatric Malignancy</p>	<p>4. FESS In Pediatric Chronic Rhinosinusitis & Nasal Polyps</p>	<p>Congenital Anomalies Surgery</p> <p>3. Management of Ear Congenital Anomaly</p> <p>4. Nutritional Support In ENT Congenital Anomalies</p>	<p>On Laryngotracheal Surgery</p>
12.15 - 13.00	Lunch Symposium 1 From Guidelines To Optimal Patient Care Schering Plough		LUNCH SYMPOSIUM 2 Rhinitis-Asthma		LUNCH SYMPOSIUM 3 PT ABDI	
	<p>1. Allergic Rhinitis, Rhinosinusitis & Nasal Polyposis: Common Comorbid Condition & Management</p> <p>2. Current Management of Allergic Rhinitis : ARIA Guidelines</p> <p>3. Safety Considerations in The Use of Intranasal Corticosteroid: Myths & Realities</p>		<p>1. Epidemiological Survey Of Children's Allergic Rhinitis In Beijing .</p> <p>2. Allergic March: From Atopic Dermatitis to Allergic Rhinitis</p> <p>3. Effect of Antiallergy Treatment on Childhood Epistaxis</p>		Video Session of Hering Loss in Children	
13.00 - 14.00	LUNCH		LUNCH		LUNCH	
14.00 - 15.30	EARLY DETECTION & INTERVENTION OF HEARING IMPAIRMENT IN CHILDREN		AFTERNOON SYMPOSIUM		CONSENSUS MEETING / PANEL DISCUSSION	
	<p>1. Diseases & Related Factors in Hearing Impaired Children</p> <p>2. The Impacts of Hearing Disorders to Pediatric Growth & Development</p>	<p>AS 1 Ear & Hearing</p> <p>1. Genetic Polymorphisms In Cytokine In</p>	<p>AS 2 Airway</p> <p>1. Congenital Anomali Of The Larynx</p>	<p>Tonsilo-Adenoidectomy</p> <p>Antibiotics For Acute Ear-Nose-Throat Infection</p>		

	<ul style="list-style-type: none"> 3. Overview of Newborn Hearing Screening 4. Referral System Management of Newborn Deafness 5. Experience of Newborn Hearing Screening in Jakarta 	<ul style="list-style-type: none"> Pediatric Recurrent AOM 2. Rehabilitation Of Auditory Brain Stem Implants In Children 3. Hearing Rehabilitation Using Bone Anchored Hearing Aid 	<ul style="list-style-type: none"> 2. Subglottic Stenosis In A Tertiary Children's Hospital 3. Fetal Surgery - The EXIT Procedure For Neonatal Airway Rescue 4. Management Of Pediatric Airway Foreign Body 5. Paediatric Bronchoscopy ; Indication Spectrum Of 10 Years Statistics 	
15.30 - 15.45	Coffee Break	Coffee Break		CLOSING
15.45 - 17.15	AIRWAY INSTRUCTIONAL COURSE Phantom Hands-on Rigid & Fiberoptic Bronchoscopy	INSTRUCTIONAL COURSE Phantom Hands-on Esophagoscopy on Laryngopharyngeal Reflux R Evaluation		

15/10