PERTUBUHAN TORASIK MALAYSIA

MALAYSIAN
THORACIC SOCIETY

LUNG
FOUNDATION
OF MALAYSIA

MALAYSIAN THORACIC SOCIETY
ANNUAL CONGRESS 2013

14th to 16th June 2013

Hilton Kuala Lumpur
Malaysia

SOUVENIR PROGRAMME & ABSTRACT BOOK

Contents

Malaysian Thoracic Society
Office Bearers 2011-2013

President	PROF DR ROSLINA ABDUL MANAP
Vice-President	ASSOC PROF DR PANG YONG KEK
Hon Secretary	DR HOOI LAI NGOH
Hon Treasurer	ASSOC PROF DR JESSIE DE BRUYNE
Hon Assistant Secretary	DR ASIAH KASSIM
Hon Assistant Treasurer	ASSOC PROF DR HOW SOON HIN
Committee Members	PROF DR LIAM CHONG KIN
	DR FAUZI MOHD ANSHAR
	DR MAT ZUKI BIN MAT JAEB
	DR CHUA KEONG TIONG
	DR TIE SIEW TECK
Co-opted Committee Member	ASSOC PROF DR TENGKU SAIFUDIN TENGKU ISMAIL

MTS Annual Congress 2013
Organising Committee

Advisor	PROF DR LIAM CHONG KIN
Organising Chairman	ASSOC PROF DR TENGKU SAIFUDIN TENGKU ISMAIL
Scientific Committee	DR FAUZI MOHD ANSHAR (Chairman – Adult Programme)
	DR ASIAH KASSIM (Chairman – Paediatric Programme)
	PROF DR ROSLINA ABDUL MANAP
	ASSOC PROF DR PANG YONG KEK
	ASSOC PROF DR HOW SOON HIN
	DR MAT ZUKI BIN MAT JAEB
	DR CHUA KEONG TIONG
	DR TIE SIEW TECK
Secretary / Business Manager	DR HOOI LAI NGOH
Treasurer	ASSOC PROF DR JESSIE DE BRUYNE
Publicity and Publications	ASSOC PROF DR PANG YONG KEK
Social Events	ASSOC PROF DR JESSIE DE BRUYNE
Audio-Visual Facilities	DR TIE SIEW TECK
Congress Secretariat	MS KONG YOON MOI & TEAM MEMBERS, ACADEMY SECRETARIAT

Message from the President of the Malaysian Thoracic Society

Welcome to the Malaysian Thoracic Society Annual Congress 2013. Over the years, the Congress has grown from strength to strength, being fortunate to receive participation from local delegates and faculty whilst attracting foreign speakers of international repute. This highly anticipated annual event is the leading national scientific meeting in the field of respiratory medicine and brings together respiratory specialists, fellows, internists, medical officers, general practitioners and allied healthcare professionals with a common interest in this specialty and who have the passion to deliver better healthcare to our patients. We hope that you will partake and benefit from the various plenary sessions, symposia and interactive sessions that this meeting has to offer.

Throughout the preceding year, the Society has organised several workshops and seminars either in collaboration with industry or as stand-alone workshops, for both adult internists and paediatricians. These covered common respiratory diseases such as asthma and COPD and also pulmonary rehabilitation and interventional pulmonology. The Society is also committed to training and improving the standards of care and, to this end, the first Fibreoptic Bronchoscopy and Train-the-Trainers workshop was held last year. The Society was involved in publishing the Clinical Practice Guideline in Tuberculosis 2012.

The Society has for a few years now, set aside funding for our Members in terms of travel grants to attend scientific meetings locally and overseas, as well as setting up the MTS Research Fund (major and incentive categories). Further plans include setting standards in the training and accreditation of the performance of lung function testing in the country. The Society has also grown in other ways, with an active and informative website, as well as moving towards streamlining all member queries, registration and payment online. This Congress also sees the launch of our electronic membership card.

We hope that delegates will also have time to renew acquaintances and exchange views with each other during the meeting. This Congress, which is a major focus of Society, represents the culmination of the tireless efforts of the Organising Committee. I therefore, extend my heartfelt appreciation to the dedicated Committee Members and Secretariat, led by Associate Professor Dr Tengku Saifudin and Dr Fauzi Anshar as organising and scientific chairpersons respectively. Lastly, on behalf of the Society, may I thank our sister partner, the Lung Foundation of Malaysia, and our corporate partners for their support in making this event a success.

Warmest wishes,

Roslina Abdul Manap

Prof Dr Roslina Abdul Manap
President
Malaysian Thoracic Society

Message from the Chairman of the Lung Foundation of Malaysia

On behalf of the Lung Foundation of Malaysia (LFM), I am delighted to extend a warm welcome to all delegates of the 2013 Annual Congress of the Malaysian Thoracic Society. It is indeed an honour for the LFM to, once again, be a co-organiser of this important and prestigious event.

I would like to take this opportunity to thank and congratulate the Organising Committee for putting together, an excellent scientific programme. The scientific programme covers a wide range of topics in respiratory diseases; from basic sciences to developmental disorders, infectious diseases, cancer, airway diseases and new inventions for the management of airway and lung diseases. The Clinical Grand Rounds will be featured again and further expanded to cater for hospital based, community-based as well as paediatric practices, and would provide an opportunity for the presenters to share interesting cases with the delegates in a more interactive manner. As we are aware, research constitutes an important element for the advancement of knowledge. Young researchers will have the opportunity to show-case their research works during the oral and poster sessions, and allow others to share and discuss the findings. The meeting should therefore, cater for everyone's interest.

In line with our objective of promoting research in lung diseases, the LFM will again, provide awards for winners of oral and poster presentations, presented at the Congress. The awards will be presented at the Gala Dinner. It is gratifying to note that over the years, more and more papers with improved quality are presented at the Congress and I trust the quality of research will be better this year.

I hope you will have a fruitful meeting and an enjoyable stay in Kuala Lumpur.

Dato' Dr Zainudin bin Md Zin
Chairman
Lung Foundation of Malaysia

Message from the Organising Chairman of the MTS Annual Congress 2013

On behalf of the Organising Committee, I would like to warmly welcome you to the Malaysian Thoracic Society Annual Congress 2013. Dr Fauzi Anshar and Dr Asiah Kassim have put up an exciting scientific programme together, which will cater for all participants attending the Congress. The scientific programme will cover clinical topics, basic sciences and the latest advancements in respiratory diseases.

We have invited many renowned international and local speakers who are experts in their field. There will also be a symposium specifically for Allied Health Professionals to address issues relevant to their practice. There will also be a Pre-Congress Postgraduate Workshop in University Malaya Medical Centre, organised by Dr Chua Keong Tiong to cater for junior doctors and general physicians keen on updating themselves in the management of common respiratory diseases.

For the last few years, we have seen a significant number of abstracts being submitted for the congress, which reflects well on the future of respiratory medicine research. This year, we received a record number of abstracts and the best five abstracts have been chosen to be presented in the oral presentation.

I would also like to take this opportunity to convey my appreciation to our co-organiser, the Lung Foundation of Malaysia, the Organising Committee who has been working tirelessly to ensure the success of this congress, and to our industry partners for their financial support.

We are looking forward to meeting you at the Congress and wish you all an enjoyable event.

Assoc Prof Dr Tengku Saifudin Tengku Ismail
Organising Chairman
MTS Annual Congress 2013

Programme Summary

13TH JUNE 2013, THURSDAY		
0830 – 1700	PRE-CONGRESS POST-GRADUATE WORKSHOP	*Dewan Kuliah 3, University of Malaya*

DATE / TIME	14TH JUNE 2013 FRIDAY	15TH JUNE 2013 SATURDAY			16TH JUNE 2013 SUNDAY
0700 – 0800	REGISTRATION	REGISTRATION	**Meet-the-Expert Session**		**Meet-the-Expert Session**
0800 – 0900	WELCOME REMARKS **PLENARY 1**	**PLENARY 2**			**PLENARY 4**
0900 – 1000	**SYMPOSIUM 1A – 1C**	**SYMPOSIUM 3A – 3C**			**SYMPOSIUM 5A – 5B**
1000 – 1100	TEA	TEA			TEA
1100 – 1200	MORNING SYMPOSIUM *(Boehringer-Ingelheim)*	MORNING SYMPOSIUM *(AstraZeneca)*			MORNING SYMPOSIUM *(Orient Europharma)*
1200 – 1300	LUNCH SYMPOSIUM *(GlaxoSmithKline)* LUNCH	Hospital Grand Rounds 1	Hospital Grand Rounds 2	Paediatric Grand Rounds	LATE MORNING SYMPOSIUM *(Roche)* **Debate**
1300 – 1400	FRIDAY PRAYERS	LUNCH SYMPOSIUM *(Takeda)* LUNCH			Closing by Organising Chairman (followed by lunch)
1400 – 1500	**SYMPOSIUM 2A – 2C**	**PLENARY 3**			
1500 – 1600		**SYMPOSIUM 4A – 4B**			
1600 – 1700	TEA SYMPOSIUM *(Pfizer)* TEA	TEA			
1700 – 1800	Concurrent Oral and Poster Presentations	**MTS Annual General Meeting**			
1800 – 1900	DINNER SYMPOSIUM *(Novartis)*	Meeting of Respiratory Medicine Subspecialty Trainers and Trainees			
1900 – 2200	DINNER	DINNER SYMPOSIUM *(MSD)* **MTS Annual Congress Gala Dinner**			

Pre-Congress Post-Graduate Workshop
13th June 2013, Thursday

Venue: Dewan Kuliah 3, University of Malaya, Kuala Lumpur, Malaysia

PULMONARY PARENCHYMAL DISEASES

0830 – 0900	Managing community-acquired pneumonia – How I do it ***Prof Dr Roslina Abdul Manap***
0900 – 0930	TB management in special circumstances ***Dr Goon Ai Khiang***
0930 – 1000	Approach to diffuse parenchymal lung disease ***Dr Wan Haniza Wan Mohamad***
1000 – 1030	Pulmonary haemorrhage – Common scenarios ***Assoc Prof Dr Pang Yong Kek***
1030 – 1100	Tea

PLEURAL DISEASES

1100 – 1130	Pneumothorax – From primary to secondary, from medical to surgical ***Prof Dr Liam Chong Kin***
1130 – 1200	Approach to pleural effusion ***Dr Hooi Lai Ngoh***
1200 – 1230	Management of empyema thoracis ***Dr Andrea Ban***
1230 – 1330	Lunch

QUIZ TIME

1330 – 1415	Quiz – Imaging in respiratory medicine ***Datuk Dr Abdul Samad Sakijan***
1415 – 1500	Quiz – Lung function test ***Dr Chua Keong Tiong***
1500 – 1530	Tea

AIRWAY DISEASES

1530 – 1600	Stepwise management in bronchial asthma ***Assoc Prof Dr Tengku Saifudin Tengku Ismail***
1600 – 1630	COPD management – Translating guidelines into clinical practice ***Prof Dr Mohammed Fauzi Abdul Rani***
1630 – 1700	Bronchiectasis, not just sputum ***Dr Mat Zuki Mat Jaeb***

Daily Programme
14th June 2013, Friday

0700 – 0800 REGISTRATION

0800 – 0810 WELCOME REMARKS
by Prof Dr Roslina Abdul Manap, President, Malaysian Thoracic Society &
Assoc Prof Dr Tengku Saifudin Tengku Ismail, Chairman, MTS Annual Congress 2013

0810 – 0850 **PLENARY 1** *GRAND BALLROOM C*
Chairpersons: Dr Norhaya Mohd Razali / Prof Dr Roslina Abdul Manap
Metabolic and cardiovascular consequences of OSA – Are they causally related? *[pg 16]*
Prof Dr David Rapoport

0850 – 1020 **SYMPOSIUM 1A Pneumonia (Adults)** *GRAND BALLROOM C*
Chairpersons: Dr Andrea Ban Yu Lin / Prof Dr Pang Yong Kek
1 The impact of influenza and other respiratory viruses in Malaysia *[pg 16]*
Prof Dr Jamal I-Ching Sam
2 Updates on antibiotics for hospital-acquired pneumonias
Dr Suresh Kumar
3 Managing the septicaemic patient
Dr Noor Airini Ibrahim

0850 – 1020 **SYMPOSIUM 1B Updates On Childhood Asthma (Paeds)** *SENTRAL BALLROOM B*
Chairpersons: Dr Norzila Mohamed Zainudin / Assoc Prof Dr Surendran
1 The different phenotypes of asthma: From mild to difficult asthma *[pg 17]*
Prof Dr Gary Wong Wing-Kin
2 Management of severe acute exacerbation of asthma *[pg 17]*
Prof Lucy Lum Chai See
3 International consensus on childhood asthma: Agreement or controversy *[pg 18]*
Prof Dr Gary Wong Wing-Kin

0850 – 1020 **SYMPOSIUM 1C Lung Cancer** *SENTRAL BALLROOM A*
Chairpersons: Assoc Prof Dr Kuan Yeh Chunn / Dr Hilmi Lockman
1 Advanced lung cancer: Are we doing enough? *[pg 18]*
Prof Dr Liam Chong Kin
2 Updates on lung cancer: The surgical approach *[pg 19]*
Dr Alan Sihoe
3 Dealing with lung cancer complications: How aggressive can we be? *[pg 19]*
Assoc Prof Dr How Soon Hin

1020 – 1050 TEA

1050 – 1130 SS1 - SPONSORED MORNING SYMPOSIUM *(Boehringer-Ingelheim)* *GRAND BALLROOM C*
Chairperson: Assoc Prof Dr Tengku Saifudin Tengku Ismail
Five years after UPLIFT – Where does tiotropium stand?
Datuk Dr Aziah Ahmad Mahayiddin

1130 – 1210 SS2 - SPONSORED LUNCH SYMPOSIUM *(GlaxoSmithKline)* *GRAND BALLROOM C*
Chairperson: Dr Fauzi Mohd Anshar
COPD: A silent killer - New approaches and challenges
Prof Dr Grant Waterer

1210 – 1415 LUNCH / Friday Prayers

1415 – 1545 **SYMPOSIUM 2A Sleep Disordered Breathing (Adult)** *GRAND BALLROOM C*

Chairpersons: Dr Ahmad Izuanuddin Ismail / Dr Ashari Yunus

1 360° assessment of SDB [pg 20]
Prof Dr David Rapoport

2 Surgical management for sleep disordered breathing [pg 20]
Dr Jeevanan Jahendran

3 PAP therapy: Which one and for whom? [pg 20]
Prof Dr David Rapoport

1415 – 1545 **SYMPOSIUM 2B Obesity And Respiratory Morbidity (Paediatric)** *SENTRAL BALLROOM B*

Chairpersons: Assoc Prof Dr Jessie de Bruyne / Dr Mariana Daud

1 Sleep-disordered breathing in children – Is it real? [pg 21]
Dr Asiah Kassim

2 Challenges in managing OSAS in obese children [pg 21]
Dr Rus Anida Awang

3 Asthma and obesity: Are they related? [pg 22]
Dr Dg Zuraini Sahadan

1415 – 1545 **SYMPOSIUM 2C Chest Tube Management** *SENTRAL BALLROOM A*

Chairpersons: Dr Michael Stephen Joseph / Dr Liza Ahmad Fisal

1 Chest tube designs for pneumothorax and pleural effusion [pg 22]
Dr Fauzi Mohd Anshar

2 Managing persistent air leak in pneumothorax: Surgical and non-surgical interventions [pg 23]
Dr Alan Sihoe

3 Chest tube mishaps and how to minimise them? [pg 24]
Dr Mat Zuki Mat Jaeb

1545 – 1625 SS3 - SPONSORED TEA SYMPOSIUM *(Pfizer)* *GRAND BALLROOM C*

Chairperson: Prof Dr Liam Chong Kin

State-of-the-art MRSA nosocomial pneumonia management: How can we improve treatment outcomes [pg 24]
Dr Petrick Periyasamy

1625 – 1655 TEA

1655 – 1800 **CONCURRENT ORAL AND POSTER PRESENTATIONS** *SENTRAL BALLROOM A*

Oral Paper Chairperson: Dr Fauzi Mohd Anshar
Posters Coordinator: Dr Hooi Lai Ngoh

1800 – 1840 SS4 - SPONSORED DINNER SYMPOSIUM *(Novartis)* *GRAND BALLROOM C*

Chairperson: Dato' Dr Abdul Razak Muttalif

COPD treatment: Comparative effects of once-daily indacaterol in improving patient outcomes [pg 25]
Prof Dr David Price

Followed by Dinner (1900 – 2100)

Daily Programme
15th June 2013, Saturday

0700 – 0800 REGISTRATION

0700 – 0800 **MEET-THE-EXPERT SESSION**

Adults: *SENTRAL BALLROOM A*

Chairperson: Dr Jamalul Azizi Abdul Rahaman

Role of VATS in managing lung diseases in Malaysia

Mr Balaji Badmanaban

Paediatric: *SENTRAL BALLROOM B*

Chairperson: Assoc Prof Dr Jessie de Bruyne

Management of recurrent pre-school wheeze

Prof Dr Gary Wong Wing-Kin

0810 – 0850 **PLENARY 2** *GRAND BALLROOM C*

Chairpersons: Assoc Prof Dr How Soon Hin / Dr Goon Ai Khiang

New advances in pulmonary embolism management *[pg 25]*

Dr Zul Hilmi Yaakob

0850 – 1020 **SYMPOSIUM 3A Clinical Grand Rounds** *GRAND BALLROOM C*

Chairpersons: Prof Dr Richard Loh Li Cher / Dr Wan Haniza Wan Mohamad

1 Lung cancer *[pg 26]*
Prof Dr Liam Chong Kin

2 Orphan lung disease
Dr Tie Siew Teck

3 Hypoventilation syndrome *[pg 26]*
Prof Dr David Rapoport

0850 – 1020 **SYMPOSIUM 3B Respiratory Complications In Premature Infants** *SENTRAL BALLROOM B*

Chairpersons: Assoc Prof Dr Anna Marie Nathan / Dr Dg Zuraini Sahadan

1 The development of lung disease in the premature infant *[pg 26]*
Dr Ahmad Fadzil Abdullah

2 The management of infant respiratory distress syndrome – What's new?
Dr Chee Seok Chiong

3 Long-term outcome of bronchopulmonary dysplasia *[pg 27]*
Dr Mariana Daud

0850 – 1020 **SYMPOSIUM 3C Interventional Pulmonology** *SENTRAL BALLROOM A*

Chairpersons: Dr Kunji Kannan Sivaraman / Dr Mustafa Kamal Abdul Razak

1 Bronchial thermoplasty - Bronchoscopic management of difficult-to-control asthma *[pg 28]*
Dr Jamalul Azizi Abdul Rahaman

2 Airway stents in benign airway stenosis *[pg 28]*
Dr Jamsak Tscheikuna

3 Complications of airway stents and dealing with them *[pg 29]*
Dr Jamsak Tscheikuna

1020 – 1050 TEA

1050 – 1130 SS5 - SPONSORED MORNING SYMPOSIUM *(AstraZeneca)* *GRAND BALLROOM C*

Chairperson: Prof Dr Roslina Abdul Manap

Updates in COPD management, lessons from real world study – PATHOS

Dr Steve Chan Ming-Cheng

1130 – 1230 **HOSPITAL GRAND ROUNDS 1** *GRAND BALLROOM C*

Chairpersons: Dato' Dr Zainudin Md Zin / Dr Chua Keong Tiong

1 A story of the master of disguise ***Dr Rashidah Yasin*** *(Institut Perubatan Respiratori)*
2 The patient with increasing dyspnoea ***Dr Muhammad Redzwan*** *(Queen Elizabeth Hospital)*

1130 – 1230 **HOSPITAL GRAND ROUNDS 2** *SENTRAL BALLROOM A*

Chairpersons: Dr Irfhan Ali Hyder Ali / Dr Azza Omar

1 The patient with prolonged fever ***Dr Siti Kamariah*** *(Universiti Teknologi MARA)*
2 A tale of two cousins ***Assoc Prof Dr Pang Yong Kek*** *(Universiti Malaya)*

1130 – 1230 **PAEDIATRIC GRAND ROUNDS** *SENTRAL BALLROOM B*

Chairperson: Assoc Prof Dr Surendran

- Institut Pediatrik, Hospital Kuala Lumpur
- University Malaya Medical Centre
- Hospital Raja Perempuan Zainab ll, Kota Bahru, Kelantan

1230 – 1310 SS6 - SPONSORED LUNCH SYMPOSIUM *(Takeda)* *GRAND BALLROOM C*

Chairperson: Assoc Prof Dr Pang Yong Kek

Targeting airway and systemic inflammation: Insights from the bench

Prof Dr Dennis Doherty

1310 – 1400 LUNCH

1400 – 1440 **PLENARY 3** *GRAND BALLROOM C*

Chairpersons: Assoc Prof Dr Roslan Harun / Dr Umadevi A Muthukamaru

Controversies in Chronic Obstructive Pulmonary Disease (COPD) trial design: Can they give us the right answers? *[pg 29]*

Prof Dr Dennis Doherty

1440 – 1610 **SYMPOSIUM 4A Asthma (Adults)** *SENTRAL BALLROOM A*

Chairpersons: Dr Kauthaman Mahendran / Dr Lalitha Pereirasamy

1 Innovative ways to manage asthma
Dr Sujeet Rajan

2 Viral infections and asthma *[pg 30]*
Prof Dr Alberto Papi

3 New treatment modalities for difficult to control asthma
Prof Dr David Bernstein

1440 – 1610 **SYMPOSIUM 4B Airways: Clearer And Better** *SENTRAL BALLROOM B*

Chairpersons: Dr Wong Jyi Lin / Mr Riza Sharom Abdul Razak

1 Quit smoking – Now anyone can lead the way *[pg 30]*
Ms Mah Suit Wan

2 Prescribing exercise for the COPD patients *[pg 31]*
Ms Anna Letchumy Ponniah

3 Update on airway clearance *[pg 31]*
Dr Albert Lim Yick Hou

1610 – 1640 TEA

1615 – 1800 **MTS ANNUAL GENERAL MEETING** *SENTRAL BALLROOM A*

1800 – 1845 **Meeting of Respiratory Medicine Subspecialty Trainers and Trainees** *SENTRAL BALLROOM A*

1900 – 1940 SS7 - SPONSORED DINNER SYMPOSIUM *(MSD)* *GRAND BALLROOM C*

Chairperson: Datuk Dr Aziah Ahmad Mahayiddin

Adult asthma management: Current treatment gaps and new treatment option for improving control *[pg 32]*

Prof Dr David Bernstein

2000 – 2200 **MTS ANNUAL CONGRESS GALA DINNER** *GRAND BALLROOM C*

1930 – 2000 Arrival of delegates and guests
2000 – 2010 Speech by Professor Dr Roslina Abdul Manap, President, Malaysian Thoracic Society
2010 – 2030 Speech by Y Bhg Datuk Dr Noor Hisham Abdullah, Director-General of Health Malaysia
2030 Dinner is served
2100 – 2115 Announcement of winners of oral and poster presentations
2115 – 2130 Speech by Dato' Dr Zainudin Md Zin, Chairman, Lung Foundation of Malaysia
2200 End of Function

Daily Programme
16th June 2013, Sunday

0700 – 0800 **MEET-THE-EXPERT SESSION** *SENTRAL BALLROOM A*

Adults:
Chairperson: Dr Mat Zuki Mat Jaeb

Drug resistant TB. Principles of management
Dr Zarir F Udwadia

0810 – 0850 **PLENARY 4** *GRAND BALLROOM C*

Chairpersons: Datuk Dr Aziah Ahmad Mahayiddin /
Assoc Prof Dr Tengku Saifudin Tengku Ismail

TB: An overview of the new Malaysian TB guidelines *[pg 32]*
Dr Jamalul Azizi Abd Rahaman

0850 – 1020 **SYMPOSIUM 5A TB** *GRAND BALLROOM C*

Chairpersons: Dato' Dr Abdul Razak Muttalif / Dr Nurhayati Mohd Marzuki

1 TB in Malaysia: Are we on the right direction? *[pg 33]*
Dr Jiloris Frederick Dony

2 Laboratory diagnosis of tuberculosis *[pg 33]*
Prof Dr Ngeow Yun Foong

3 TB: MDR, XDR, TDR and beyond *[pg 34]*
Dr Zarir F Udwadia

0850 – 1020 **SYMPOSIUM 5B Congenital Lung Diseases In Children** *SENTRAL BALLROOM A*

Chairpersons: Dr Rus Anida Awang / Dr Ahmad Fadzil Abdullah

1 Congenital diaphragmatic hernia: Intervention and outcome *[pg 34]*
Dato' Dr Zakaria Zahari

2 Classification and clinical approach to congenital lung malformations *[pg 35]*
Prof Dr T M Ramanujam

3 Respiratory complications in children with congenital tracheo-oesophageal fistula *[pg 36]*
Assoc Prof Dr Anna Marie Nathan

1020 – 1050 TEA

1050 – 1130 SS8 - SPONSORED MORNING SYMPOSIUM *(Orient Europharma)* *GRAND BALLROOM C*

Chairperson: Prof Dr Liam Chong Kin

Asthma treatment: Focus on small airways *[pg 37]*
Prof Dr Alberto Papi

1130 – 1210 SS9 - SPONSORED LATE MORNING SYMPOSIUM *(Roche)* *GRAND BALLROOM C*

Chairperson: Prof Dr Liam Chong Kin

Tarceva as first-line treatment in patients with EGFR activating mutation positive NSCLC
Prof Dr Caicun Zhou

1210 – 1310 **DEBATE** *GRAND BALLROOM C*

Chairpersons: Dato' Dr Abdul Razak Muttalif / Dr Fauzi Mohd Anshar

Sleep medicine in Malaysia is best led by a respiratory physician
For : ***Dato' Dr Zainuddin Md Zin (Chest Physician)***
Against : ***Dr Balwinder Singh (ENT)***

1310 Closing by Organising Chairman *GRAND BALLROOM C*

Followed by Lunch *SENTRAL BALLROOM*

REGISTRATION

The registration hours are:

14th June 2013 (Friday)	0700 to 1700 hrs
15th June 2013 (Saturday)	0700 to 1700 hrs
16th June 2013 (Sunday)	0700 to 1200 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 (15TH JUNE 2013)

The Gala Dinner will be held in the Grand Ballroom C, Hilton Kuala Lumpur. Registered delegates are requested to confirm your attendance at the registration counter.

Dress: Lounge suit / Long-sleeved batik

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 Sentral Exchange 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:

14th June 2013 (Friday)	0700 to 1700 hrs
15th June 2013 (Saturday)	0700 to 1700 hrs
16th June 2013 (Sunday)	0700 to 1100 hrs

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

POSTERS

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

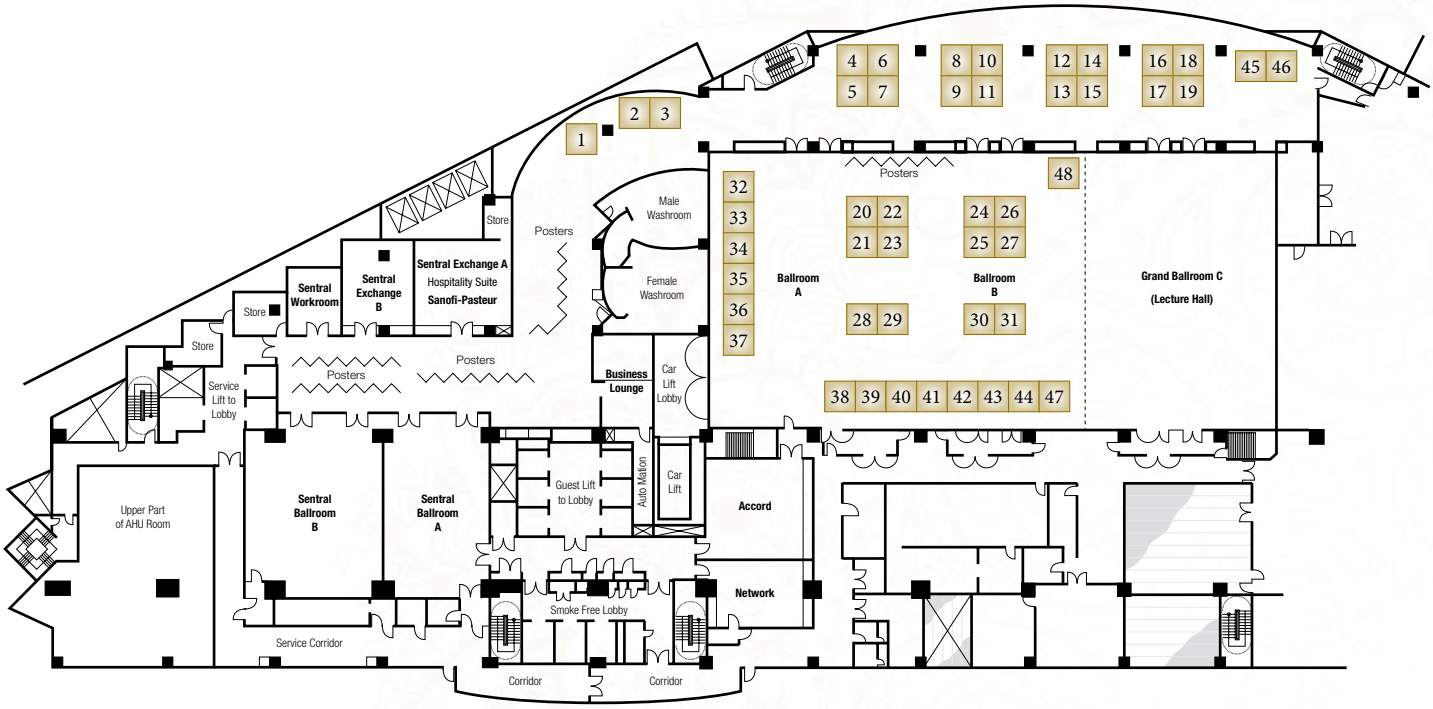
For the convenience of all delegates, please ensure that your mobile phone is silenced during the conference sessions.

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.

Level 6, Hilton Kuala Lumpur



BOOTH STAND	COMPANY
1	Eli Lilly (Malaysia) Sdn Bhd
2 - 3	Boehringer-Ingelheim (Malaysia) Sdn Bhd
4 - 7	AstraZeneca Sdn Bhd
8 - 11	Merck Sharp & Dohme
12 - 15	Takeda Malaysia Sdn Bhd
16 - 19	GlaxoSmithKline Pharmaceutical Sdn Bhd
20 - 23	Pfizer (Malaysia) Sdn Bhd
24 – 27	Novartis Corporation (M) Sdn Bhd
28	Bayer Co (Malaysia) Sdn Bhd
29	Endodynamics (M) Sdn Bhd
30	Insan Bakti Sdn Bhd
31	ResMed (M) Sdn Bhd
32	Roche (Malaysia) Sdn Bhd
33	Delta Medisains (M) Sdn Bhd

BOOTH STAND	COMPANY
34	Kinetik Edar Sdn Bhd
35	Cipla Malaysia Sdn Bhd / Cipla Limited / Healol Pharmaceuticals Sdn Bhd
36	Lifeline Innovators Sdn Bhd
37	Biocare Pharmaceutical (M) Sdn Bhd
38	Rigel Pharma Sdn Bhd
39	Science Valley Sdn Bhd & Formedic Technologies Sdn Bhd
40	Acucare Systems (M) Sdn Bhd
41	Edaran Bio-Medik Sdn Bhd
42	All Eights (M) Sdn Bhd
43	Daya Cergas (M) Sdn Bhd
45- 46	Orient Europharma (M) Sdn Bhd
44, 47	Philips Healthcare
48	Somnotec (M) Sdn Bhd

Acknowledgements

The Organising Committee of the MTS Annual Congress 2013 expresses its deep appreciation to the following for their support and contributions:

FOUNDATION PARTNER

The Lung Fundation of Malaysia

PLATINUM PARTNERS

AstraZeneca Sdn Bhd

GlaxoSmithKline Pharmaceutical Sdn Bhd

Merck Sharp & Dohme

Novartis Corporation (M) Sdn Bhd

Pfizer (Malaysia) Sdn Bhd

Takeda Malaysia Sdn Bhd

SILVER PARTNERS

Boehringer-Ingelheim (Malaysia) Sdn Bhd

Orient Europharma (M) Sdn Bhd

Roche (Malaysia) Sdn Bhd

OTHER PARTNERS

Acucare Systems (M) Sdn Bhd

All Eights (M) Sdn Bhd

Bayer Co (Malaysia) Sdn Bhd

Biocare Pharmaceutical (M) Sdn Bhd

Cipla Malaysia Sdn Bhd / Cipla Limited / Healol Pharmaceuticals Sdn Bhd

Daya Cergas (M) Sdn Bhd

Delta Medisains (M) Sdn Bhd

Edaran Bio-Medik Sdn Bhd

Eli Lilly (Malaysia) Sdn Bhd

Endodynamics (M) Sdn Bhd

Insan Bakti Sdn Bhd

Kinetik Edar Sdn Bhd

Lifeline Innovators Sdn Bhd

Philips Healthcare

ResMed (M) Sdn Bhd

Rigel Pharma Sdn Bhd

Sanofi-Pasteur

Science Valley Sdn Bhd & Formedic Technologies Sdn Bhd

Somnotec (M) Sdn Bhd

METABOLIC AND CARDIOVASCULAR CONSEQUENCES OF OSA – ARE THEY CASUALLY RELATED?

David M Rapoport
Sleep Medicine Program, New York University School of Medicine, New York. USA

Obstructive Sleep Apnea (OSA) is a common disorder, affecting 4-20% of the adult population. Its most common manifestation is excessive daytime somnolence resulting from the sleep disruption, but recent evidence suggests there may be numerous other long term consequences affecting the cardiovascular and cerebrovascular systems. It is believed that these could result from the intermittent hypoxia, repetitive arousals and sympathetic stimulation which occurs with the airway event terminations. There is also evidence that intermittent hypoxia and possibly sleep disruption have profound metabolic effects, including effects on glucose metabolism and insulin resistance. Mechanisms underlying these putative consequences of OSA and the evidence supporting their importance will be presented. An obvious corollary of accepting these long term consequences of untreated OSA is the question of whom to treat in the absence of the typical findings of severe daytime sleepiness.

THE IMPACT OF INFLUENZA AND OTHER RESPIRATORY VIRUSES IN MALAYSIA

Jamal I-Ching Sam
Department of Medical Microbiology, University of Malaya, Kuala Lumpur, Malaysia

Influenza is a major cause of morbidity and mortality worldwide, but the impact in developing Asian countries like Malaysia is unknown or underestimated. This may be due to a lack of diagnostic services, and a lack of awareness amongst clinicians. As a result, use of interventions against influenza, such as vaccine or antivirals, is low in developing countries. The WHO strongly recommends studies of influenza epidemiology, disease burden, and vaccine effectiveness in developing countries, with a view to encouraging further uptake of vaccine. In Malaysia, knowledge of influenza epidemiology is sporadic and limited. Using routine diagnostic methods, we showed that 11% of respiratory virus infections in UMMC are due to influenza. More sensitive molecular detection will undoubtedly show a higher incidence. In our earlier work, we found that 12.1% of children hospitalised with influenza had severe disease, and the direct healthcare cost per patient hospitalised with pandemic H1N1 exceeded the annual health expenditure per capita. We also showed a population seroprevalence of 14.7-21% for seasonal influenza, and an overall cumulative incidence of 18.1% of pandemic influenza in Kuala Lumpur. Influenza antiviral resistance is also present in Malaysia, with high rates of adamantane resistance in H3N2, and high rates of neuraminidase inhibitor (NAI) resistance in seasonal H1N1, although the predominantly circulating A(H1N1)pdm09 continue to be susceptible to NAIs. These few available studies suggest that the clinical and socioeconomic impact of influenza in Malaysia may be considerable, and warrant fuller study. Other common respiratory viruses in Malaysia include respiratory syncytial virus, adenovirus, and rhinovirus, although the impact of these is also little understood.

THE DIFFERENT PHENOTYPES OF ASTHMA: FROM MILD TO DIFFICULT ASTHMA

Gary Wong Wing-Kin
Department of Paediatrics and School of Public Health, The Chinese University of Hong Kong, Hong Kong

Childhood asthma is one of the manifestations of the syndrome of allergic airway diseases. The ISAAC studies have shown that many children suffered from a combination of upper and lower airway allergic disease leading to the concept of one airway diseases. Studies in Asia clearly showed that a large proportion of asthmatics are poorly controlled. Phase 2 of the Asthma in Reality in the Asia-Pacific (AIRIAP) study revealed that close to 50% of asthma patients in Asia are in the uncontrolled category as classified by the GINA guideline. Several important factors contribute to the sub-optimal control and they include poor recognition of symptoms, inadequate evaluation of asthma, under-treatment, and poor adherence to prescribed medication. Poor control of asthma will lead to poor control of the upper airway diseases and vice versa. Inappropriate and excessive use of antibiotics contributes to poor control of asthma and allergic rhinitis. One needs to recognize the different mechanisms of cross talk between the upper and lower airways in order to have a better understanding of how to improve the control of both diseases. In well controlled patients, a simple viral infection can precipitate an acute exacerbation. The typical eosinophilic type of inflammation is relatively easy to control but the neutrophilic type of inflammation is more frequently found in difficult asthma. Future drugs including the use of biologics, CRTH2 and Chemokine blockers may provide adjunctive treatment for these patients with difficult asthma.

MANAGEMENT OF SEVERE ACUTE EXACERBATION OF ASTHMA

Lucy Lum Chai See
Department of Paediatrics, Faculty of Medicine, University of Malaya, Kuala Lumpur, Malaysia

Severe acute exacerbation of asthma is a medical emergency which requires a multi-pronged approach and frequent evaluation of the response to therapy. The cornerstones of the management are rapid administration of oxygen, inhalations with bronchodilators, systemic corticosteroids and intravenous rehydration. Inhaled bronchodilators include selective β-2 agonists and anticholinergics. Additional treatment in cases of "silent chest" may involve intravenous administration of β-2 agonists and magnesium sulphate. The patient has to be closely monitored for response as well as side effects of these drugs, such as salbutamol if given by both inhalation and intravenous routes. Both non-invasive and invasive ventilation may be options when medical treatment fails to prevent respiratory failure. The goals of ventilation are to take over the work of breathing from the exhausted patient and allow respiratory muscles to rest and to ensure sufficient but not necessarily "normal" gas exchange until airway obstruction is reversed. In essence the lungs should be allowed to empty to a more favourable lung volume while airway resistance improves with medical therapy. The risks of barotrauma are very real in patients who are ventilated for severe airway obstruction where "stacking of breaths" leads to more air-trapping. Setting appropriate alarm limits on the mechanical ventilator are very important to alert the physician to its development.

INTERNATIONAL CONSENSUS ON CHILDHOOD ASTHMA: AGREEMENT OR CONTROVERSY

Gary Wong Wing-Kin
Department of Paediatrics and School of Public Health, The Chinese University of Hong Kong, Hong Kong

Asthma is the most common chronic childhood respiratory disease and is now recognized as a syndrome with different phenotypes or endotypes rather than a disease. Epidemiology studies have clearly shown that there are different subtypes of asthma with different natural history. The recent AAAAI-EAACI joint task force suggested the importance of using "endotypes" to describe the various subtypes of asthma. An asthma endotype is defined by a distinct functional or pathophysiological mechanism. There are many international or national guidelines aiming to help clinicians in caring of patients with asthma. They are primarily based on randomized clinical trials but those being performed in the last few decades have paid very little attention to subtypes of asthma. Although guidelines should be simple and easy to use but it is difficult to be simple as asthma is a complex syndrome. There are more similarities than differences when one compare the different versions of asthma guidelines. The Asthma ICON aims to summarize the recommendations from various guidelines to provide the international consensus in the treatment of childhood asthma. LABA has been found to be very effective in adult asthmatics as an add-on therapy to steroid. The role of LABA is rather limited in younger children. Episodic viral induced asthma is even more difficult to treat. We need to understand clearly the causative factors of poor control in various subtypes and detailed assessment of each patient are necessary to improve care of patients with this common disorder.

ADVANCED LUNG CANCER: ARE WE DOING ENOUGH?

Liam Chong Kin
Department of Medicine, Faculty of Medicine, University of Malaya, Kuala Lumpur, Malaysia

Lung cancer is the leading cause of cancer death worldwide as well as in Malaysia. The dismal prognosis of lung cancer is due to presentation at a late stage where cure by surgery is not possible and an at best modest effect of palliative treatment with chemotherapy. In the past few years, there have been spectacular advances in understanding of the molecular origins of lung cancer and the treatment of advanced lung cancer has evolved quite rapidly after decades of near stasis. Systemic therapies in the form of cytotoxic and targeted agents are increasingly efficacious with less toxicity. While 5-year survival is still poor, the 1-year survival and other patient outcomes such as quality of life are improving with better standard of care.

As progresses accelerate, it become increasingly difficult to keep "up to date". While radiation oncologists are quick to adopt technological advances, new machines are expensive and require substantial capital input from hospitals. Chemotherapy options have proliferated and, in the absence of clear-cut management algorithms, decisions regarding initial and subsequent treatments of advanced lung cancer are complex. The lack of a national lung cancer treatment guideline means many patients do not have access to appropriate treatment. In addition, due to financial constraints, not all patients can benefit from recent breakthroughs and advances in the treatment of lung cancer.

Lung cancer patients should preferably be cared for by a multidisciplinary team if such a team of professionals is available. Each member of the team comprising chest physicians, radiologists, pathologists, surgeons, oncologists, palliative care physicians, social workers and specialist nurses; with their distinctive professional role is able to offer optimum treatments, support and care to these patients.

Advanced lung cancer is associated with significant patient distress and the aim of medical care for patients with terminal lung cancer is to decrease symptom burden, enhance the quality of remaining life, and increase survival benefit. Non-beneficial treatment should be avoided. Recognition and management of lung cancer-related symptoms such as pain, dyspnoea, airway obstruction, cough, bone metastasis, brain metastasis, spinal cord metastasis, superior vena cava syndrome, haemoptysis, pleural effusions, venous thromboembolic disease, depression, fatigue, anorexia, and insomnia can improve the quality of life for patients with lung cancer. Good communication and advance care planning from the time of diagnosis until the last phase of the illness are important.

UPDATES ON LUNG CANCER: THE SURGICAL APPROACH

Alan D L Sihoe
Division of Cardiothoracic Surgery, The University of Hong Kong, Hong Kong

In recent years, we have witnessed great advances in the imaging, molecular classification, irradiation therapy and pharmacotherapy of lung cancer – still the leading neoplastic cause of death worldwide. Yet despite these remarkable developments, surgical resection remains the only realistic chance of cure for this deadly disease. Thankfully, advances in thoracic surgery have kept pace with progress in other fields of lung cancer management.

Increasing understanding of lung cancer biology has refined what kinds of surgery can be offered. Recognition of oligometastatic disease have allowed surgeons to offer effective surgery to patients previously considered to have advanced disease. Recent revisions to the classification of adenocarcinomas have helped define subsets of patients that may benefit from less radical sublobar resections that reduce morbidity without compromising therapeutic efficacy.

The delivery of lung cancer surgery remains a key focus for development by thoracic surgeons. Video-Assisted Thoracoscopic Surgery (VATS) is now firmly established as an approach of choice for lung cancer resection, offering better patient recovery. But the VATS approach itself is not a finished article, and is continually being improved. The use of sophisticated robotic systems has been advocated to aid intricate VATS procedures. More recently, the uniportal and needlescopic VATS approaches have been introduced which push the limit of just how minimally invasive surgery can be. Complementing the technical advances, technological advances have also been an integral part of modern thoracic surgical progress, including the use of new generations of surgical sealants and digital chest drainage systems.

This talk will outline some of these latest trends in lung cancer surgery. The ultimate goal of surgical advances is not only to benefit individual patients, but to potentially extend the eligibility for surgery to those traditionally deemed 'unsuitable' for major resection.

DEALING WITH LUNG CANCER COMPLICATIONS: HOW AGGRESSIVE CAN WE BE?

How Soon Hin
Department of Internal Medicine, Kulliyah of Medicine, International Islamic University Malaysia, Kuantan, Pahang, Malaysia

In Malaysia, lung cancer is the most common cancer (16.3%) among men and third most common cancer among women (5.4%, 2007 data) 1. It accounted for the most cancer deaths in 2001 that occurred in this country2. Most of our patients presented with advanced disease and surgery is not an option, more so, more than half of operable patients refused surgery 3. Hooi et al showed that operative rate for lung cancer was only 4.8% in Penang. 4Chemotherapy with or without radiotherapy is the treatment of choice in this group of patients 5. TKI is effective in EGFR mutation patient but it is not freely available to the poor. Despite recent advancement in the treatment of lung cancer, most of our advanced lung cancer patients suffered from various complications including SVC or airway obstruction, dyspnea due to pleural or pericardial effusion, lymphagitis carcinomatosis, distance metastasis to brain, spine, bone etc, haemoptysis and paraneoplastic syndrome. We should be familiar and aggressive in managing their complications in order to prolong their life.

1. National Cancer Registry Report 2007, Malaysia Cancer Statistic. http;// www.makna.org.my/PDF/MalaysiaCancerStatistics2007.pdf. Accessed 3rd may 2013.
2. Vital statistics Malaysia 2005. Department of Statistics, Malaysia 2005
3. Menon MA, Saw HS. Lung cancer in Malaysia. Thorax 1979; 34: 269–73.
4. Hooi LN, Hamzah KM, Jahizah H. Survival of patients surgically treated for lung cancer.Med J Malaysia. 2003; 58::490-8.
5. Stewart LA, Pignon JP. Chemotherapy in non-small cell lung cancer: a meta-analysis using updated data on individual patients from 52 randomised clinical trials. Non-small Cell Lung Cancer Collaborative Group. BMJ 1995 ;311:899-909.

360° ASSESSMENT OF SDB

David M Rapoport
Sleep Medicine Program, New York University School of Medicine, New York, USA

Sleep Disordered Breathing (SDB) is a common disorder, which consists of a complex interaction of the anatomy and functional behavior of the upper airway. Conceptually, multiple factors could contribute to the obstruction and their relative importance probably varies across individuals. This has led to the concept of "phenotyping" of the disorder. While it is not clear that all of the relevant factors have been identified, bony structure, soft tissue volume, tissue compliance and passive effects of distal traction, airway muscle tone and CNS drive and loop gain of the "controller" and "plant" for respiratory stability have been proposed. The techniques for characterizing the role of each in a given patient and the implications for severity and treatment are just now being investigated. This talk will present an overview of these topics.

SURGICAL MANAGEMENT FOR SLEEP DISORDERED BREATHING

Jeevanan Jahendran
Department of Otorhinolaryngology, Pantai Cheras Medical Centre, Kuala Lumpur, Malaysia

In recent years we are beginning to understand and realize the importance of restful sleep and its impact on the human body. Sleep disordered breathing disorders account for a large proportion of these patients. Sleep-disordered breathing (SDB) is a collective clinical term encompassing primary snoring, upper airway resistance syndrome (UARS), and obstructive sleep apnea (OSA). There are a multitude of treatment options available for SDB and this can be classified into conservative, apparative and surgical. The approach in the management of these patients should be multidisciplinary and should be tailored according to a myriad of factors ranging from the age of the patient, patient expectations, symptom scores, BMI, severity of disease, coexisting co-morbid diseases and sites of obstruction in the upper airway from the nose to the laryngopharynx. This lecture will cover the surgical options available for managing obstructed sites in the upper airway including nasal and pharyngeal surgery. Successful surgery depends on proper patient selection, proper procedure selection and the experience of the surgeon. Most surgeries are done in combination and in a multistep manner ranging from simple minimally invasive procedures to major surgery on the pharyngeal architecture. However surgical success is not predictable over time and the patient may need other forms of therapy as well. Surgery in SDB is not without its inherent dangers though life-threatening complications are rare.

PAP THERAPY: WHICH ONE AND FOR WHOM?

David M Rapoport
Sleep Medicine Program, New York University School of Medicine, New York, USA

Sleep Disordered Breathing (SDB) is characterized by both airway obstruction and occasionally the need for ventilatory support. Both can be accomplished by non-invasive means using nasal or full face masks. The modes of pressure delivery range from Continuous Positive Airway Pressure (CPAP) which is used for splinting open the upper airway, to variations of non-invasive ventilation. The latter can be delivered either to increase total ventilation (ie bilevel) in the case of hypoventilation syndromes or to stabilize periodic breathing (ie adaptive servoventilation). All three modes are highly effective, but tolerance of mask ventilation remains suboptimal. A number of newer modes have been developed, primarily for use with CPAP, whose goal is to enhance comfort and increase adherence to therapy. These include bilevel devices, expiratory pressure relief (eg Cflex and EPR), modes responsive to arousals (eg Sensawke) and other ways to deliver upper airway pressures (eg trans nasal insufflations and oral negative airway pressure). A survey of these modes, their mechanisms for action and a brief review of their effectiveness will be presented.

SLEEP-DISORDERED BREATHING IN CHILDREN – IS IT REAL?

Asiah Kassim
Respiratory Unit, Paediatric Institute, Hospital Kuala Lumpur, Kuala Lumpur, Malaysia

The prevalence of children with obesity and overweight is in increasing trend globally especially in developed countries. Many factors contributed to the changes in the trend. Previously, many obesity related diseases were seen in adult population only. At present, many diseases associated with obesity are also seen among children.

Sleep disordered breathing in particular Obstructive sleep apnea (OSA) occurs in children of varying age group depending to their risk factors. Initially OSA in children was closely related to the presence of adeno-tonsillar hypertrophy. However, many studies had shown that many children still had OSA after adeno-tonsillectomy. Other risk factors for OSA in children were recognized i.e. craniofacial structure, neuromuscular disorder, syndromic children and obesity.

Pathogenesis of OSA in obese children is not only related to the presence of adeno-tonsillar hypertrophy. Some mechanism is still unclear and related to the adipose tissue distribution. Severity of OSA in obese children has been documented in many polysomnography studies. The impact of OSA on neurocognitive status of children has need shown in many studies which may be related to the disruptive sleep and respiratory events during sleeping.

OSA also causes inflammation process either locally or systemically which has been documented in many studies involving adult and children. However, in obese children there are other possible sequelae related to OSA which include the metabolic, endocrine and cardiovascular system.

CHALLENGES IN MANAGING OSAS IN OBESE CHILDREN

Rus Anida Awang
Hospital Penang, Penang, Malaysia

Sleep disordered breathing (SDB) is a common childhood condition, which ranges from primary snoring to upper airway resistance syndrome and obstructive sleep apnoea syndrome (OSAS). Obstructive sleep apnoea syndrome (OSAS), the most severe entity of SDB is affecting 2–3% of children. OSAS in children is characterised by recurrent episodes of elevated upper airway resistance with partial or complete intermittent obstruction of the upper airway during sleep, and is usually accompanied by snoring, episodic desaturation, hypercapnoea, and repeated arousals leading to fragmented sleep. Complications include neurocognitive impairment, behavioural problems, failure to thrive, and cor pulmonale, particularly in severe cases. Risk factors include adenotonsillar hypertrophy, obesity, craniofacial anomalies, and neuromuscular disorders.

The increasing prevalence of obesity in children seems to be associated with an increased prevalence of obstructive sleep apnoea syndrome (OSAS) in children. Prevalence of sleep disordered breathing in obese children ranging between 13 to 66 per cent, which is 10-20 times more common compared to normal children. Possible pathophysiological mechanisms contributing to this association include the following: adenotonsillar hypertrophy due to increased somatic growth, increased critical airway closing pressure, altered chest wall mechanics, and abnormalities of ventilatory control. Both obesity and OSAS are associated with metabolic syndrome, which is a constellation of features such as hypertension, insulin resistance, dyslipidemia, abdominal obesity, and prothrombotic and proinflammatory states. There is some evidence that OSAS may contribute to the progression of metabolic syndrome with a potential for significant morbidity.

The treatment of OSAS in obese children has not been standardised. Adenotonsillectomy is considered the primary intervention followed by continuous positive airway pressure treatment if OSAS persists. Other methods such as oral appliances, surgery, positional therapy, and weight loss may be beneficial for individual subjects.

The issues are being discussed and suggestion made on an approach to the management of obese children with snoring and possible OSAS based on the current evidence.

ASTHMA AND OBESITY: ARE THEY RELATED?

Dg Zuraini Sahadan
Paediatric Respiratory Unit, Hospital Serdang, Selangor, Malaysia

Asthma and obesity have been increasing in prevalence internationally among children. Overweight status is strongly related to asthma prevalence levels but the onset of overweight or obesity is not associated with the onset of subsequent asthma. Evidence points to an association between these chronic morbidities suggesting the development of an `obese asthma' phenotype in childhood. Bronchial asthma and obesity is among a group of multietiologic complex disease which influence each other in their origin and development.

The link between high body weight and asthma may be stronger in non-allergic asthma. Although the nature of the association between obesity status and asthma remains unclear, prospective studies pointed that high body weight precedes asthma symptoms. There is evidence that the pro-inflammatory environment created by excess adiposity may provide a mechanism leading to obese asthma in children and adolescents. Weight loss studies conducted in children without asthma have demonstrated a reduction in systemic inflammation. However, the impact of weight loss in the obese paediatric population with asthma has not been investigated.

Most prospective studies suggest that obesity increases the risk of subsequent asthma. Possible mechanisms for the relationship between asthma and obesity include airway inflammation, mechanical changes associated with obesity, changes in airway hyper-responsiveness, and changes in physical activity and diet. Most studies suggest that obesity increases the clinical severity of asthma. Obese asthma may constitute a unique asthma type that is more difficult to manage. It is more resistant to available steroid treatments, requires higher medication use, and is associated with more frequent hospitalizations in comparison to asthma in normal weight child. The impact on the patient's quality of life and prognosis is significant including health costs.

CHEST TUBE DESIGNS FOR PNEUMOTHORAX AND PLEURAL EFFUSION

Fauzi Mohd Anshar
Prince Court Medical Centre, Kuala Lumpur, Malaysia

Chest tubes are conduits by which fluid is removed from the pleural cavity. For physicians, the most common indications are symptomatic pleural effusions and pneumothoraces. The basic requirement for tube thoracostomy is a one-flow drainage into a receptacle. Any system would include the tube and a collection bag or bottle. Suction may be applied to facilitate improved evacuation of air in a case of pneumothorax. Traditionally, large bore Argyle-type chest tubes are inserted but there has been a move over the past decade towards using small-bore chest tubes which are 10-12 French guage in size using Seldinger technique. The move is driven by the perception that smaller bore chest tubes are better tolerated by patients, less invasive and easier and faster to insert. The is evidence to show that a smaller bore chest tube works just as well as large bore chest tubes in the usual cases of pleural effusion and pneumothorax.

The drainage system has advanced from traditional underwater seal bottles to one-way dry bottle systems that allow greater patient mobility such as the Heimlich and Pneumostat valves and the Atrium systems. For patients with persistent troublesome malignant pleural effusion, long-term indwelling catheter systems (e.g. Pleuryx system) has been developed to allow easier intermittent drainage.

Whatever systems or insertion techniques are used, safety of patients is paramount. Junior doctors, who are mostly responsible for inserting chest tubes, are spending less time in the wards with the trend of reduced working hours, thus on-the-spot training may be limited. Therefore emphasis must be given to proper training and supervision with greater use of real-time bedside ultrasound imaging. This will reduce rates of failed aspirations and incidence of complications.

MANAGING PERSISTENT AIR LEAK IN PNEUMOTHORAX: SURGICAL AND NON-SURGICAL INTERVENTIONS

Alan D L Sihoe
Division of Cardiothoracic Surgery, The University of Hong Kong, Hong Kong

Any container full of gas or fluid can leak, and sadly the lung is no exception. Indeed, leaking lungs are amongst the most common problems seen on any thoracic medical or surgical ward today. Compared to a leaking tire or balloon, the lung has the capacity to heal and leaks may stop in most cases. But what if they don't ?

One common solution is to effect pleurodesis. Over the years, many developments have been made in terms of what agents can be used and how they can be delivered. Today, talc can be delivered via pleuroscopy in awake patients, for example. But besides working on the outside of the lung, we can now work on the inside too, through the use of endobronchial valves. Emerging evidence suggests that these remarkable devices may have a role to play in selected patients with air leaks.

The way in which we monitor air leaks has also advanced through the introduction of digital chest drain systems. The accurate objective monitoring allows decisions to be made on interventions and chest drain removal, contributing to more expedient and safer management for the patient.

Ultimately, however, many patients do require more radical therapy: surgery. Thankfully, advances in the operative approach – such as the use of needlescopic surgery – have dramatically reduced the morbidity 'footprint' of surgery. Effective surgery can be delivered with barely more trauma than the existing chest drain wound. Moreover, new surgical technologies have also made pneumothorax surgery more effective than ever before – even in high risk patients such as those with gross emphysema.

This talk will outline some of the latest developments in how leaking lungs can be repaired.

CHEST TUBE MISHAPS AND HOW TO MINIMISE THEM?

Mat Zuki Bin Mat Jaeb
Hospital Raja Perempuan Zainab II, Kota Bharu, Kelantan, Malaysia

Chest drains are inserted to remove pathological collections of air or fluid in the pleural space to permit complete expansion of the lung, thereby restoring normal ventilation. It is simple but effective tools and often inserted by a relatively inexperienced medical staff. However it can be associated with an unacceptable and under recognised degree of morbidity and mortality.

There are two principal methods of tube thoracostomy: the blunt dissection technique and the trocar technique, however the trocar technique is associated with a higher rate of intrathoracic injury

Complications of chest drain can result due to inadequate knowledge of thoracic anatomy or inadequate training and experience.

These complications can simply be classified as technical or infective. Technical causes include tube malposition, blocked drain, chest drain dislodgement, reexpansion pulmonary edema, subcutaneous emphysema, nerve injuries, cardiac and vascular injuries, oesophageal injuries, residual/postextubation pneumothorax, fistulae, tumor recurrence at insertion site, herniation through the site, chylothorax, and cardiac dysrhythmias.

Infective complications include empyema and surgical site infection including cellulitis and necrotizing fasciitis.

Safe insertion and correct management are important to avoid such complications.

Chest drains are painful for the patient, therefore adequate analgesia is necessary.

When caring for and maintaining a patient with a chest tube, the following steps are important:

- Keep chest tubes patent
- Note the presence of drainage and fluctuations
- Observe the patient's vital signs and levels of comfort
- Note the chest dressing status
- Type of suction used

Decision and timing of chest tube removal must be individualized to the patient, taking into consideration the reason for the chest tube placement, whether or not the patient has had a pulmonary resection, and whether the patient is mechanically ventilated. Premature or delay in chest tube removal may lead to complications.

STATE-OF-THE-ART MRSA NOSOCOMIAL PNEUMONIA MANAGEMENT: HOW CAN WE IMPROVE TREATMENT OUTCOMES

Petrick Periyasamy
Medical Department, Universiti Kebangsaan Malaysia Medical Centre, Kuala Lumpur, Malaysia

Treatment of MRSA Pneumonia has seen a lot of randomized trials and numerous meta-analysis over the years. With the rising minimum inhibitory concentration of vancomycin to MRSA, we have been using higher doses of vancomycin to achieve the trough levels of 15-20mg/L at the expense of a possible deterioration of kidney function. These itself doesn't always guarantee success. This may be partly due to limited access of vancomycin to the lung parenchyma Linezolid offers another possible solution. Linezolid has been compared to vancomycin in numerous trials and the outcome has been mixed. The latest trials (the ZEPHyR trial) offer a new hope in the management of MRSA pneumonia.

COPD TREATMENT: COMPARATIVE EFFECTS OF ONCE-DAILY INDACATEROL IN IMPROVING PATIENT OUTCOMES

David B Price
University of Aberdeen, United Kingdom

New GOLD guidelines from 2011/2012 provide clear recommendations that aim to treat COPD by reducing symptoms (defined by health status, e.g CAT scores) and exacerbation risk. There is increasing evidence for the use of sustained bronchodilation to achieve these aims in patients with COPD.

In some cases inhaled corticosteroids (ICS) can be a recommended treatment for COPD, such as where asthma is a co-morbidity , or in patients with frequent exacerbations of COPD. In particular ICS treatment has been shown to have a beneficial effect on smoking patients with asthma . However inappropriate use of high-doses of ICS treatment has been shown to increase the rate of hospitalisation for pneumonia and the risk of fractures, which increases with increasing dose of ICS . In a nested case-control cohort analysis of respiratory disease patients, inhaled corticosteroid use was associated with an increase in the risk of diabetes onset and progression, particularly at higher doses

In long-term clinical studies the once-daily β(2)-adrenoceptor agonist indacaterol improved symptoms and overall health status when compared with twice-daily formoterol or salmeterol . The UPLIFT trial showed that once a day long-acting bronchodilator improved a range of outcomes in COPD; including health status, symptoms, exacerbations and mortality compared to other respiratory treatments. A double-blind trial showed the dual bronchodilator indacaterol/ glycopyrronium bromide treatment had improved symptoms and exercise tolerance after 26 weeks compared with fluticasone/salmeterol.

The earlier use of bronchodilators, both in single formulations and combined will reduce dependence on ICS and ICS/ LABA therapies which are inappropriate for early stage COPD.

REFERENCES:

1. GOLD 2011
2. Price et. al. IPCRG 2012
3. Chalmers Thorax 2002
4. Price PCRJ 2012
5. Suissa AJM 2010
6. McKeage, Drugs 2012
7. Tashkin NEJM 2008
8. Vogelmeier 2012

Plenary 2

NEW ADVANCES IN PULMONARY EMBOLISM MANAGEMENT

Zul Hilmi Yaakob
KPJ Tawakkal Specialist Hospital, Kuala Lumpur, Malaysia

Pulmonary embolism (PE) is a common, serious and potentially fatal disease. The most severe form of PE, which is massive PE, accounts for about 5% of cases, and is defined by the presence of a large central PE with hypotension, with a systolic blood pressure of <90 mm Hg. It carries a high mortality rate, estimated between 17.4% and 28%, particularly during the first few hours after admission.

It is believed that the mortality is caused by acute severe right heart failure resulting in cardiogenic shock. Despite this high mortality rate, the treatment of major PE has not been well standardized and remains controversial and elusive. Several modalities of treatment have been implemented upon treating PE and massive PE in particular.

Recently new advances in term of medical therapy and percutaneous intervention especially in the treatment of massive PE has been developed. However, there is still no large randomized trial comparing the efficacy and safety of each treatment modality and the choice of treatment largely depends on local expertise and facility.

LUNG CANCER

Liam Chong Kin
Department of Medicine, Faculty of Medicine, University of Malaya, Kuala Lumpur, Malaysia

A case of advanced non-small cell lung cancer in a never smoker will be presented to highlight the role of histology-driven induction cytotoxic chemotherapy, maintenance chemotherapy, palliative radiotherapy and targeted therapy after identification of a druggable driver oncogene in her tumour.

HYPOVENTILATION SYNDROME

David M Rapoport
Sleep Medicine Program, New York University School of Medicine, New York, USA

Obesity Hypoventilation Syndrome (OHS) is a variant of sleep disordered breathing which overlaps with, but differs from, obstructive sleep apnea syndrome. OHS is characterized by daytime hypercapnia (PCO2>45 mmHg) in an obese patient (BMI>30 kg/m2) with no underlying primary lung or neuromuscular disease. The incidence of OHS appears to be about 10% of the patients who present to the sleep disorders center, but may be higher in certain extremely obese populations. Symptoms vary widely, ranging from none, to excessive daytime sleepiness alone or vague pulmonary complaints; in many cases, the patient will present with cor pulmonale or unexplained cardiopulmonary failure. Acute treatment consists of diuresis and oxygen, combined with nocturnal assisted ventilation, with the nocturnal non-invasive positive airway pressure (by mask) being the cornerstone of therapy. The etiology of the hypercapnia is not fully understood, but can be explained by a disorder of the control of ventilation which is a combination of underlying hypoventilation and lack of responses to acute exacerbations of ventilatory impairments.

THE DEVELOPMENT OF LUNG DISEASE IN THE PREMATURE INFANT

Ahmad Fadzil Abdullah
Department of Paediatrics, Hospital Tengku Ampuan Afzan, Kuantan, Pahang, Malaysia

Children with brochopulmonary dysplasia (BPD) as a group becoming larger over the years. It will soon become one of the commonest causes of with chronic lung disease in children. This irony is as a result of increased medical progress as more premature infant will survive and in younger age. This result the incidence of BPD has not reduced despite improvement in medical care of premature baby.

The lung is usually ready to support life properly by the age of 36 weeks gestation. Thus in order to support life in these premature babies, oxygen, ventilation and other artificial life support have to be provided. This will expose immature lung to barotraumas, volutrauma and radical particles which will damage the lung. This immature babies also prong to infection especially lung infection. All these traumatic event with immature lung result in inflammation and damage of the lung, and abnormal lung recovery. The severity of the damage also dependent on the age of the babies born as it is related to severity in lung immaturity. Other important factors are the gens, associated congenital heart problem especially patent ductus arteriosis, antenatal inflammation and steroid exposure.

The lung will be abnormal in both gross and microscopic structure. It also has abnormal respond to viral infections and inhale irritants. The lung usually small (restrictive), easily developed obstructive airway disease (hyperactive airway).

BPD is not only lung disease per see. It has associated feature involved cardiac, neurodevelopement and bone. This make BPD also a systemic disease.

CONCLUSION:
BPD is a type of CLD in children which has a lot of morbidity and high risk of mortality throughout their life.

LONG-TERM OUTCOME OF BRONCHOPULMONARY DYSPLASIA

Mariana Daud
Paediatrics Department, Hospital Raja Perempuan Zainab II, Kota Bharu, Kelantan

Preterm birth is associated with a higher risk for respiratory complications during infancy particularly if complicated by development of bronchopulmonary dysplasia (BPD). BPD is the most common form of chronic lung disease in infancy. Infants with severe BPD survive with significant pulmonary sequelae. Affected infants remains oxygen dependent for many months and usually have recurrent respiratory infections or wheezing illnesses, requiring hospital admissions during first 2 years of life. Patients with 'classical' BPD often had severe respiratory failure in the neonatal period with chronic pulmonary fibrosis and airway smooth muscle hypertrophy. Infants with 'new' BPD have reduced alveolarisation and may have deterioration in lung function within first year of life. Infants with severe chronic lung disease may also develop tracheomalacia and/or bronchomalacia, resulting in atelectasis and/or hyperinflation due to dynamic airway obstruction.

Infants with BPD improve clinically during the first year of life; with lung repair and somatic growth considerable improvements in pulmonary function can also occur. Though lung volume improves with age, expiratory flows appear to improve much more slowly. Airway obstruction with normal lung volume suggests normal growth of lung volume but not of airway size. There is good evidence that these pulmonary morbidity carries into childhood. In the longest follow up study, 25% of adolescents and young adults with former BPD had current respiratory symptoms; this cohort had more wheezing, episodes of pneumonia, and long term medication use than controls. Most subjects had pulmonary function abnormalities that indicated airway obstruction, airway hyperresponsiveness, and hyperinflation. Most of these abnormalities were mild to moderate but about 25% were severe.

As young adults they have a reduced respiratory reserve. There is concern that mild pulmonary insults in childhood may be the precursor of early onset chronic obstructive pulmonary disease (COPD) in adults. The risk will increase with further pulmonary insults specially exposure to cigarette smoking. The rate of lung function loss with age is as yet unknown in these subjects. As infants with chronic lung disease are much more immature today than those studied in the past, the prognosis for the present population of patients with chronic lung disease may not be comparable to that reported in the literature. From adult pulmonologists' perspective, survivors of BPD who reach adolescence and adulthood might increasingly become a new patient population calling for special preventive and therapeutic measures.

BRONCHIAL THERMOPLASTY- BRONCHOSCOPIC MANAGEMENT OF DIFFICULT-TO-CONTROL ASTHMA

Jamalul Azizi Abd Rahaman
Division of Respiratory Medicine, Department of Medicine, Hospital Serdang, Selangor, Malaysia

Asthma is a chronic inflammatory disorder of the airways characterized by airway hyper-responsiveness and reversible airflow limitation. The prevalence of severe persistent asthma in Malaysia is estimated at around 8.3 percent. Uncontrolled asthma leads to hospitalizations, frequent emergency room visits, loss of workdays and poor quality of life resulting in high economic costs and resource utilization.

The stepwise approach in asthma management is well described. However, some patients remain symptomatic despite standard medications. When asthma is difficult to control despite maximal treatment, good adherence, environmental control, correct inhaler technique and after exclusion of comorbid conditions, additional therapeutic options are needed.

Bronchial thermoplasty (BT), delivered by the AlairTM System is a safe and minimally invasive procedure for severe asthma. It involves delivery of controlled radiofrequency thermal energy to the airway wall that results in prolonged reduction of the airway smooth muscle. As it delivers controlled thermal energy, it does not 'burn' the airway smooth muscle. It is a complementary treatment and is not a replacement to standard asthma medications.

The effectiveness and safety of BT has been shown in 3 randomized controlled trials. In these trials, BT increased the level of asthma control and improved the quality of life in severe asthmatics. Furthermore, no procedure-related clinical complications and deterioration in lung function were observed up to 5 years. BT requires 3 treatment sessions, each scheduled approximately 3 weeks apart.

BT offers treatment for patients with severe asthma who continue to be symptomatic despite maximal medical treatment. The American Thoracic Society (ATS) and American College of Chest Physicians (ACCP) concluded that clinical trials support BT as a therapeutic option for severe asthmatics and should no longer be considered experimental.

Serdang Hospital has performed BT on 2 patients. The progress of both patients will be presented.

AIRWAY STENTS IN BENIGN AIRWAY STENOSIS

Jamsak Tscheikuna
Division of Respiratory Diseases and Tuberculosis, Department of Medicine, Faculty of Medicine,
Siriraj Hospital, Mahidol University, Bangkok, Thailand

Tracheobronchial stenosis from benign causes account for 4-13% in adult airway obstruction. In our experience, most common cause is post tuberculosis infection. Airway stenosis can categorized base on anatomy into simple stenosis in which the length of the stenotic part is less than 1.5 cm. and complex stenosis in which there are multiple areas of stenosis, the length more than 1.5 cm or there are also other type of stenosis such as tracheobronchomalacia. The treatment of choice in benign tracheobronchial stenosis is surgical resection of the stenotic part and end to end anastomosis. In situation that there is high risk for surgery, patient is in severe acute dyspnea or there are multiple stenosis area, bridging therapies using endobronchial treatments are recommended. These techniques include balloon dilatation, mechanical dilatation using rigid bronchoscope, laser therapy, electrocautery or argon plasma coagulation and cryotherapy. Airway stent is another modality of treatment in benign tracheobronchial stenosis. The recommendation is to use only silicone type stent because of the lower incidences of complications and easier to remove as compare to metallic type stent. Aims of stent placement in benign tracheobronchial stenosis are to support the airway until the formation of rigid airway framework established or to confirm the etiology of dyspnic symptom in case of trachobronchomalacia. The stent removal is intermittently done with reevaluation of airway patency. Patients are instructed to use normal saline nebulization regularly and aware of the possible complications such as stent migration and infection.

COMPLICATIONS OF AIRWAY STENTS AND DEALING WITH THEM

Jamsak Tscheikuna
Division of Respiratory Diseases and Tuberculosis, Department of Medicine, Faculty of Medicine,
Siriraj Hospital, Mahidol University, Bangkok, Thailand

The most common use of stent is re-establishing the patency of narrowed central airways. A clinically relevant obstruction may be caused by intraluminal tumor growth or by extrinsic compression. Stent-related side effects and complications are mucostasis, migration, granulation tissue formation and tumor overgrowth, fractures and stent failure. An underestimated but annoying problem for patients is halitosis. The bad smell results from colonization of the stent with bacteria and fungi. The wire and polymers used for stents can become covered with biofilms.The retained secretion can accumulate and occlude lumen of the stent. Mucostasis occurs in one-third of the patients. Frequent nebulisation with normal saline is recommended in post-stent placement to prevent this complication. Dyspnea and the inability to cough efficiently required repetitive bronchial suctioning.

Stent migration is a serious risk factor. Any straight stent can migrate up or down and even a bifurcated stent can move. If a stent moves up or down it may not be as helpful as intended. However, such a migration is not very risky as long as the stent lumen remains open. A truly life-threatening condition can develop if a migrating stent passes the carina in which it can potentially block the entrance of the unaffected lung. A general recommendation is to consider the worst case scenario if a stent is selected. The largest possible stent should be placed. Stents with struts and stents that are partly covered have a lower migration rate than fully covered stents.

Granulation tissue formation at edges of stents are found in more than half of patients. In tumor cases, there is a high possibility that the stent edges will be overgrown by cancer within weeks. Selection a slightly longer stent can prevent this tumor ingrowth or overgrowth. Less predictable is the development of granulation tissue formation.It is obvious that the scratching of the sharp edges over the mucosa as well as oversizing of stents promote the development of these secondary stenoses.

CONTROVERSIES IN CHRONIC OBSTRUCTIVE PULMONARY DISEASE (COPD) TRIAL DESIGN: CAN THEY GIVE US THE RIGHT ANSWERS

Dennis E Doherty
Lexington Veterans Administration Medical Center and the Division of Pulmonary, Critical Care
Sleep Medicine–University of Kentucky School of Medicine, Lexington, Kentucky, USA

COPD clinical trials are largely designed with criteria that define them as Randomized Controlled Trials (RCTs): the 'gold standard' for a clinical trial. The definition of a RCT is a specific type of scientific experiment most often used in medicine to establish the safety and efficacy/effectiveness of new or existing interventions for a disease process. RCTs are heavily relied upon in the development of Clinical Practice Guidelines (CPGs) for most diseases, including COPD. This allows for strong evidence based CPG recommendations. Granted, RCTs are not always possible or needed, and at times strong consensus (common sense) guides therapies. Therefore, clinical trials must not only have precise design, but should ideally study disease processes in a manner useful to the clinician in day-to-day practice ('real-world studies'). This lecture will review the history and the components of RCTs including: classification (parallel-group, cross-over, cluster), determination of superiority/non-inferiority/equivalence, proper randomization, selection of optimal endpoints, and ideal subject selection (inclusion/exclusion criteria), as well as other aspects of RCTs. Specific examples of COPD trials will be used to help illustrate how some trials have or have not addressed clinical questions adequately: If a novel bronchodilator is being studied, why would subjects be excluded from the trial if they had a change in FEV1 of > 12% and 200ml in response to a short-acting bronchodilator during the screening period? Are optimal primary and secondary outcomes being chosen for current clinical trials: there is more to COPD outcomes than a measurement of change in airflow e.g. quality of life, improvement in endurance and muscle strength, prolonging life with a better quality of life, etc.. Comparative effectiveness trials are also useful in determining optimal clinical practice in the daily management of COPD. In summary, the design of RCTs utilizing specific clinical COPD phenotypes, novel COPD biomarkers, and pathways of precision (personalized) medicine to study existing and novel COPD therapies is essential and imperative for future studies of COPD management.

VIRAL INFECTIONS AND ASTHMA

Alberto Papi
Respiratory Medicine, University of Ferrara, Italy

Much of the morbidity and health care costs of asthma are associated with acute exacerbations, which are episodes of increased symptoms and airflow obstruction. In the last decades, several studies have documented that respiratory viruses are associated with 80-85% of asthma exacerbations in children, and with more than 50% of exacerbations in adults. Among respiratory viruses, rhinovirus (RV) is the most frequent virus isolated (>60%). Although the precise mechanisms by which viral infections exacerbate asthma are not known, there is clear experimental evidence that RV can infect not only nasal but also lower airway cells and that RV infection augments allergic inflammation they are likely to be complex and may involve bronchial epithelial cells injury/activation and release of many pro-inflammatory mediators from these cells. The mechanisms of virus-induced exacerbations involve several inflammatory pathways that have been elucidated in experimental models of infection. In controlled conditions, experimental respiratory virus infection, can reproduce many of the features typical of asthma exacerbations. In particular, human experimental models have identified specific immunological deficiencies in asthmatic subjects that can contribute in turning harmless rhinovirus infections into severe exacerbation episodes.

Current pharmacological treatments, including inhaled glucocorticoids, are not very effective in the prevention of these acute events. Early treatment of virus-associated asthmatic exacerbations by adding systemic glucocorticoids or high dose inhaled glucocorticoids or by increasing the dose of inhaled glucocorticoids is of minor clinical impact both in children, suggesting that during virus-induced asthma exacerbations there is the onset of a relative glucocorticoid resistance. Recent data suggest viral inhibition of selective inflammatory pathways. Given that viral infections are the major cause of exacerbation, the development of new treatments requires a better understanding of the molecular and cellular mechanisms linking virus infection with exacerbations of asthma.

QUIT SMOKING – NOW ANYONE CAN LEAD THE WAY

Mah Suit Wan
Pharmacy Department, Universiti Kebangsaan Malaysia Medical Centre, Kuala Lumpur, Malaysia

Interventions by healthcare professionals have shown to increase quit rates among smokers. Even brief advice from a healthcare professional to quit smoking increases quit rates among patients compared to those not receiving such advice by one to three percentage points. Barriers reported by most medical professionals for not providing cessation advice include "lack of time", "lack of willpower in smokers" , "lack of interest in smokers", "lack of skills in smoking cessation" and "lack of knowledge in smoking cessation". Despite the incorporation of 5A's (Ask, Assess, Advice, Assist, Arrange) in national and even international guidelines, application practice is not always seen.

Majority of our citizens visits the General Practitioner (GP) at least once a year. This provides an excellent window of opportunities to initiate cessation. Undeniably, most of the time, brief GP visits can be drowned by other medical conditions which seems to take the centrestage. Therefore, focus can be turned to nurses, pharmacists, dentists, dental nurses, podiatrists, optometrists, physiotherapists or even dieticians. They too can lead the way in cessation initiation.

The abovementioned group can be proactively involved in cessation efforts due to their accessibility and seeing patients regularly can serve as a good platform to help smokers quit. More importantly, nurses, pharmacists, dentists, dental nurses, podiatrists, optometrists, physiotherapists, dieticians are often dealing with smoking related disease which can increase the relevance of quitting to smokers. When adequately trained, they too can provide efficacious & cost-effective cessation service to smokers.

In conclusion, tobacco use is a risk factor for 6 of the 8 leading causes of death in the world. As such, smoking has to be viewed as a form of nicotine addiction that requires urgent intervention from medical doctors and other healthcare professionals alike.

PRESCRIBING EXERCISE FOR COPD PATIENTS

Anna Letchumy Ponniah
Prince Court Medical Centre, Kuala Lumpur, Malaysia

Chronic Obstructive Pulmonary Disease (COPD) often results in a progressive decline in exercise capacity because of the vicious cycle of physical inactivity and deconditioning. Inevitably, these effects are superimposed on the natural decline in aerobic capacity (VO2max), lean body mass, and muscle strength that are expected with aging. As baseline exercise capacity declines, so does the potential for improvement in terms of absolute work capacity. Exercise training has been regarded as the cornerstone of Pulmonary Rehabilitation for patients with COPD and highly recommended as efficacious treatment in reducing disability. An appropriate prescription of exercise for patients with COPD is important in ensuring that an endurance training program in Pulmonary Rehabilitation results in peripheral adaptations, reduced dyspnoea and fatigue in daily activities, and improved physical function.

Exercise training should be tailored to address the individual patient's limiting factors (central Cardiorespiratory and/or peripheral muscle) to exercise. Patients who are capable of exercising for prolonged periods of time at high intensities will equally benefit from performing either continuous or interval training regimes. In patients with intense dyspnea symptoms, interval exercise is more appropriate. Resistance exercise should be complementary to endurance training so as to improve the strength of both the upper and the lower body muscles. In patients with profound muscle weakness, resistance exercise should constitute a training priority. Regardless of mode and type of exercise implemented, a training regime should be designed to progressively overload the patient beyond the regularly encountered levels. The overloading procedure should be continuously adjusted to maximize training adaptations. During training, close supervision is important in avoiding complications and to record the rate of progress.

UPDATE ON AIRWAY CLEARANCE

Albert Lim Yick Hou
Department of Respiratory and Critical Care Medicine, Tan Tock Seng Hospital, Singapore

The lungs are remarkably resistant to environmental assaults. Their resistance depends on an effective airway mucus clearance. The airway mucus traps foreign bodies, organisms, inhaled toxins and expel them out of the lungs by mucociliary clearance. A normal airway consists of a mucus barrier, surface epithelial cells and submucosal glands. Pathological airways may have relative dehydration, reduced volume of airway surface liquid, which is associated with increased mucus viscosity and impaired mucociliary clearance. This leads to retention of bacteria and inhaled particles, resulting airway infection and inflammation, airway damage and respiratory failure. It is paramount to have an effective airway clearance which can be enhanced by chest physiotherapy, bronchodilatation, mucoactive therapy and airway rehydration by hyper-osmolar agents. Independent chest physiotherapy techniques are simple, cost effective and widely used for patients with chronic respiratory diseases i.e., COPD, bronchiectasis etc. More recently, nebulised hypertonic saline has been demonstrated that it is effective on airway clearance for patients with chronic suppurative lung diseases such as bronchiectasis and cystic fibrosis. Mannitol is a sugar alcohol that is used as an osmotic agent. When inhaled, it creates an osmotic gradient which facilitates movement of water into lumen of airways, thereby increasing airway surface liquid and improving mucus clearance. Inhaled mannitol has been demonstrated of improving airway mucus clearance in bronchiectasis and cystic fibrosis. Mechanical insufflation/exsufflation and high frequency chest wall oscillation are important adjunct therapy for certain respiratory diseases. Mucus production and clearance is a complex process. Different respiratory conditions have different components in their airway secretion. A successful mucus clearance will require therapy to target different pathological components of the airway and mucus production.

ADULT ASTHMA MANAGEMENT: CURRENT TREATMENT GAPS AND NEW TREATMENT OPTIONS FOR IMPROVING CONTROL

David I Bernstein
University of Cincinnati College of Medicine, Cincinnati Ohio, USA

Asthma is a chronic lung disease which when inadequately treated renders affected patients susceptible to daily asthma symptoms and acute asthma exacerbations. This lecture will discuss the significance of asthma exacerbations and uncontrolled asthma and will focus on clinical data demonstrating the efficacy of a new fixed-dose combination drug, Mometasone/formoterol (MF/F), in achieving control of symptoms and reducing asthma exacerbations. Despite introduction and dissemination of treatment guidelines, the majority of patients with moderate and severe asthma remain uncontrolled. A recent international survey revealed that patients with recurrent exacerbations and uncontrolled asthma incorrectly perceive that their disease is well controlled. This may highlight unmet therapeutic needs in patients with uncontrolled control and in asthma education. Two double blind placebo controlled clinical trials of MF/F will be presented evaluating efficacy of three dose combinations of 50/5 and 100/5 mometasone furoate/formoterol administered as 2 actuations bid by metered dose inhaler. In patients uncontrolled on medium dose inhaled corticosteroids, two 26 week trials examined the efficacy of MF/F (total doses of 100/10 bid, 200/10 bid MF/F, respectively) compared with formoterol and mometasone alone or placebo in reducing FEV1 and on asthma exacerbations when compared with placebo. Both doses achieved significant improvements FEV1 relative to placebo as well as in number of exacerbations and time to first asthma exacerbation. The third important trial tested high dose MF/F (400/10 mcg twice daily) in the 12 week study vs. MF 400 mcg twice daily. MF/F treated patients had a significantly greater and sustained improvement in FEV1 as well as improved asthma control and reduced nocturnal awakenings. A one year study demonstrated the long term safety of MF/F at 200/10 and 400/10 bid doses in patients with persistent asthma.

Plenary 4

TB: AN OVERVIEW OF THE NEW MALAYSIAN TB GUIDELINES

Jamalul Azizi Abd Rahaman
Division of Respiratory Medicine, Department of Medicine, Hospital Serdang, Selangor, Malaysia

The number of tuberculosis (TB) cases in Malaysia continues to rise and it is associated with high rates of morbidity and mortality. TB burden in Malaysia is moderate, with an incidence of 81.4 per 100,000 population in 2010. The management of TB needs to be standardized to improve patient outcomes, assist monitoring and evaluation efforts.

Locally, delayed presentation, inaccurate diagnosis, inappropriate empirical treatment, high treatment default rates amongst immigrants are some of the issues encountered. It is important for the healthcare providers to know when to refer and who to refer to when in doubt. The 3rd Malaysian Clinical Practice Guideline (CPG) was launched this year on World TB Day with the aim of assisting healthcare providers in making evidence-based decisions about appropriate management of TB. This third edition is the first evidence-based TB CPG in Malaysia. The CPG is available in hard and soft copies. In keeping with times, a mobile version has been made available for smartphones and tablet computers.

In this CPG, a total of 42 clinical questions and 203 clinical papers were reviewed. This CPG had examined the evidences available from other regions and adapted them to the local context. We highlighted the advantages of light emitting diode-based fluorescence microscopy over conventional Ziehl-Neelsen light microscopy in diagnosing pulmonary TB. The value of molecular nucleic acid amplification test in the diagnosis of TB and MDR-TB was also highlighted. This CPG has a separate section on latent TB, an area which was not emphasized in the past due to lack of evidence and focus given to treatment of active TB.

It is hoped that this CPG will standardize the management of TB at all levels of care in Malaysia with a view to preventing the emergence of MDR-TB.

TB IN MALAYSIA: ARE WE ON THE RIGHT DIRECTION?

Jiloris F Dony
Disease Control Division, Ministry of Health Malaysia, Putrajaya, Malaysia

Tuberculosis (TB) remains a major public health problem in Malaysia. In 2012, there were notifications of 22,710 cases of which 22,175 (98%) cases are new TB cases and relapse. Five state (Sabah, Sarawak, Kuala Lumpur, Labuan and Kelantan) account for 45% of the total notification incident cases in Malaysia. TB mortality rate was 4.9 per every 100,000 population. Malaysia is also surrounded by countries with high burden countries.

The MDG aims to halve the prevalence and mortality rates of 1990 by 2015. Based on WHO estimates, the TB prevalence declined with 55% between 1990 and 2011, while TB mortality declined with 68% in the same period. Given the current annual decrease in TB prevalence and mortality, it is very encouraging to experience reaching the target, 50% reduction by 2015.

In 2012, 22,175 new TB and relapse cases were notified through our surveillance system and the country case detection rate (CDR) was achieved at 95%. CDR in Sabah, Sarawak, Labuan, Kelantan and Kuala Lumpur exceeded the 95% target.

A total of 78% of the 11,969 new pulmonary smear-positive cases registered for treatment in 2011 were successfully treated. Our TB cure rate has also shown an increased from 69% in 1995 to 79% in 2011.

In spite of the substantial progress made in TB control programme and have shown achievement however challenges still exist, with this the Ministry will continue to strengthen and enhance our control and care for TB patients and transforming our fight towards elimination by 2050. The rate of decline in TB prevalence and mortality is progressing positively to reach the 50% reduction goal in 2015. It will be necessary to further improve TB case detection and to address TB care amongst high risk groups in the population. Strong and continuous commitment by government and all stakeholders is needed to sustain and further strengthen and enhance the current TB control and care efforts.

LABORATORY DIAGNOSIS OF TUBERCULOSIS

(WITH REFERENCE TO THE CPG ON MANAGEMENT OF TUBERCULOSIS, NOV 2012)

Ngeow Yun Foong
Department of Medical Microbiology, Faculty of Medicine, University of Malaya, Kuala Lumpur, Malaysia

The Clinical Practice Guidelines on the management of tuberculosis, recently published by the Ministry of Health, provides the latest evidence-based updates on what is considered appropriate in the management of active and latent TB. In the laboratory investigations section, recommendations were given for the implementation of LED fluorescence microscopy, nucleic acid amplification tests, in particular, those that will allow the rapid detection of drug-resistant TB, as well as the use of the tuberculin skin test and interferon-gamma release assays for the detection of latent TB.

In this presentation, each of these recommendations with be discussed to address their scientific basis, feasibility for their incorporation into the routine diagnostic service and the correct usage of tests to maximize their contribution to patient management.

TB: MDR, XDR, TDR AND BEYOND

Zarir F Udwadia
Pulmonary Department, Hinduja Hospital & Research Centre, Mumbai, India

MDR-TB is defined as a form of tuberculosis with high level of resistance to both INH and Rifampicin, with or without resistance to other anti-tubercular drugs. MDR-TB has been recognized since the 1990's and threatens to sabotage global TB control. India and China between them contribute 50% of the worlds MDR-TB cases. Globally 5% of the worlds 9 million TB cases are drug resistant resulting in 500,000 new cases of MDR-TB annually.

The loss of response to the main bactericidal drug (Isoniazid) and the main sterilizing drug (Rifampicin) is crippling. Patients stay infectious much longer, their treatment is four times more prolonged and around 400 times more expensive in the Indian context than for a sensitive case. Drug resistance in TB is an iatrogenic disease occurring under the selective pressure of inadequate prescriptions. Over the decades drug resistance has relentlessly amplified from MDR, to XDR (2006) to TDR-TB (2012). We were the first to describe Totally Drug Resistant TB (TDR-TB) from India and our patients were resistant to all 12 commonly used 1st and 2nd line drugs.

In this talk the different forms of resistant TB will be discussed with special emphasis on the 20 TDR patients we are currently following up. The national and international fall-out of TDR-TB will be narrated and the real changes that occurred in National TB control as a result of them will be touched on. The broad principles of scientifically designing a regimen for these patients will be outlined and newer drugs and treatment options will be discussed.

CONGENITAL DIAPHRAGMATIC HERNIA: INTERVENTION AND OUTCOME

Zakaria Zahari
Department of Paediatric Surgery, Institute of Paediatrics, Hospital Kuala Lumpur, Kuala Lumpur, Malaysia

The first successful repair of congenital diaphragmatic hernia (CDH) was first reported in 1946, by Gross in Boston. At that time, the reported survival rates was as high as 90-95%.It soon became obvious with time that there was a hidden mortality due to in-utero or early post-natal death, reducing the actual survival to about 50%. Current survival rates has been quoted at 60-70%.

Since the 70-80s, the management and outcome of this condition has improved tremendously, especially in regards to newer ventilation techniques, strategies and the concept of delayed repair. With these improving treatment strategies , an increase in survival of more severely affected patients can be expected, leading to long term morbidity issues..

The emphasis of this presentation will include:

1. Pathophysiology of CDH
2. Newer techniques of ventilation strategies for CDH
3. The modality of intervention , including the role of "on-site" surgery
4. Short term outcome
5. Long term morbidity issues
6. The current role of in utero intervention

Survivors of CDH remain a complex patient population to care for throughout infancy and childhood, thus requiring almost lifelong follow up.

CLASSIFICATION AND CLINICAL APPROACH TO CONGENITAL LUNG MALFORMATIONS

T M Ramanujam

Division of Paediatric Surgery & Paediatric Urology, University Malaya Medical Centre, Kuala Lumpur, Malaysia

Congenital malformations of the lungs are uncommon. Congenital malformations of the lung may result from anomalies in the development of lungs and trachea-bronchial tree and/or anamolies of the vascular supply to the lung.

Classification of congenital anomalies of the tracheo-bronchial pulmonary apparatus is extremely difficult, not only from embryologic and morphologic stand point, but also from pathologic and clinical aspects. The lung anomalies can be classified according to the site of origin of the pulmonary embryological defect. However, complex anomalies can occur in which different developmental defects are seen in one patient. The common lesions are congenital lobar emphysema, cystic adenomatoid malformation, bronchogenic cysts, pulmonary sequestration – intralobar/extralobar, tracheobroncho- pulmonary foregut malformations with or without connection with the gastrointestinal tract. Other uncommon lesions of the lung parenchyma are agenesis or hypoplasia of the lungs. These lesions can be unilateral or may be bilateral & it may be secondary to other congenital malformations. Vascular malformations, like vascular rings & aberrant pulmonary artery slings are associated with tracheobronchial compression, stenosis & other anomalies. Clinically, they may present as respiratory distress in the neonatal period & in early infancy. In infants and children they may present with recurrent respiratory infection. It is crucial to identify the lesion, so that appropriate management can be carried out. Once infection sets in, it may be difficult to differentiate from acquired lung lesions. Diagnosis can be made by pre-natal Ultrasound. The investigations that may help are X- ray chest, CT scan with contrast, Magnetic resonance angiography, barium swallow and at times by Aortography. It is also essential to identify the extent of this lesion and to ascertain whether there is any communication with the trachea or upper gastrointestinal tract. Surgical resection is the treatment of choice. It is essential to identify abnormal arterial supply and venous drainage above & below the diaphragm. The role of pre-natal intervention is limited due to several problems. Majority of them are allowed to proceed through to term, unless there is progressive hydrops in the foetus. In this paper, the embryogenesis, classification, diagnostic methods and surgical intervention & the place of prenatal intervention, & is there a place for conservative management, will be discussed.

RESPIRATORY COMPLICATIONS IN CHILDREN WITH CONGENITAL TRACHEO-OESOPHAGEAL FISTULA

Anna Marie Nathan
Department of Paediatrics, Faculty of Medicine, University Malaya Medical Centre, Kuala Lumpur, Malaysia

The incidence of trachea-oesophageal fistula (TOF) is reported to occur in 1 in 2500-4500 live births. Approximately 85-88% of cases oesophageal atresia (OA) is associated with a fistulous connection between the oesophagus and trachea, usually between the distal loop and the trachea.1 In 6-8% there is no connection while the remaining 4-9% may have a fistula without the presence of OA.1

There is also a high frequency of associated anomalies, at over 50%, which has significant impact on the complications and outcome in these children.2 Syndromes associated with TOF are VACTERL association (vertebral, anorectal, cardiac,tracheo-esophageal,renal ,limb) , CHARGE association (coloboma,heart,atresia choanal, retarded growth,genital hypoplasia,ear deformities) and trisomy 18 and 21.3

Recurrent lower respiratory tract infections, bronchitis and aspiration pneumonia are more common in this disease especially in young children i.e. infancy and pre-school age. Post-operative respiratory complications happen in an estimated 85% of children at 12 months old and this reduces to 25% by the age of 8 years old.4 Complications such as gastro-oesophageal reflux (40%), recurrence of fistula, oesophageal strictures, tracheomalacia, scoliosis which predispose to recurrent lower respiratory infections which eventually may ultimately lead to chronic suppurative lung disease or bronchiectasis.

Management of these children require a multi-disciplinary approach with involvement of the dietician, physiotherapist and strict adherence to pulmonary clearance regimes as well as adequate treatment during exacerbations of infections to reduce the risk of pulmonary damage and bronchiectasis.

REFERENCES:

1. DePaepe A, Dolk H, Lechat MF, EUROCAT Working Group. The epidemiology of tracheo-oesophageal fistula and oesophageal atresia in Europe. Arch Dis Child 1993;68: 743–8.
2. Ioannides AS, Copp AJ. Embryology of oesophageal atresia. Semin Pediatr Surg 2009;18:2–11.
3. Torfs CP, Curry CJ, Bateson TF. Population-based study of tracheoesophageal fistula and esophageal atresia. Teratology 1995;52:220–32.
4. Couriel JM, Hibbert M, Olinsky A, et al. Long term pulmonary consequences of oesophageal atresia with tracheo-eosophageal fistula. Acta paediatr Scand 1982;71:973–8.

ASTHMA TREATMENT: FOCUS ON SMALL AIRWAYS

Alberto Papi
Research Centre on Asthma and COPD, University of Ferrara, Italy

Anti-inflammatory treatment with inhaled corticosteroids (ICS), with or without long-acting β2-adrenoceptor agonists (LABA), is the cornerstone of asthma management.

Asthma is an inflammatory disease affecting the whole respiratory system, from central airways to lung parenchyma. The involvement of the distal lung in the pathogenesis of asthma has been extensively investigated and its significance debated. Pathological findings from autopsies, surgical specimens and transbronchial biopsies have clearly shown that airway inflammation is not just a feature of central airways, but also involves the small airways and lung parenchyma of asthmatic patients. Moreover, it has been documented that the distal airways, is not a 'quiet zone' but actively contributes to enhanced air way hyperresponsiveness and airflow obstruction in asthmatic patients. Taken together these data indicate that small airways are a relevant pharmacological target for asthma treatment.

Recently, a new fixed combination Beclomethasone/Formoterol (BDP/F) has been developed. This combination uses a new Modulite hydrofluoroalkane (HFA) formulation that delivers the two components with a smaller particle size, thus increasing the proportion of the dose of the two drugs that reaches the lower airways. In asthmatic patients, the dose of extrafine BDP required to achieve an improvement in lung function is 2.5 times lower than that of non-extrafine formulations. BDP/F extrafine combination has shown to be more effective in improving asthma control than other non extrafine ICS/LABA combinations¬. The treatment with extrafine BDP/F resulted in a reduced suppression of the hypothalamic–pituitary–adrenal axis, as indicated by a significant increase of cortisol levels compared with equipotent dose of non-extrafine combination. Thus Extrafine BDP/F combination is effective and safe. The use of extarfine BDP/F has been recently proved to be effective when used as maintenance and reliever medication

The issue of whether the impairment small airway is a feature common to all asthma phenotypes or if it selectively drives the clinical expression of a specific subgroup of patients has not been fully investigated.

FREE PAPERS

DETECTION RATE OF PNEUMOCOCCAL PNEUMONIA USING URINE ANTIGEN KIT (BINAXNOW) IN ADULT COMMUNITY-ACQUIRED AND HEALTH-CARE ASSOCIATED PNEUMONIA IN UKMMC

Mohamed Faisal A H[1], Petrick P[1], Roslina A M[1], Andrea Y L Ban[1], Ramliza R[2], Anita S[2], Zalina I[2] , Tzar N K[2], Zaleha M I[3]

[1]Department of Medicine, Universiti Kebangsaan Malaysia Medical Centre, Kuala Lumpur, Malaysia
[2]Department of Microbiology and Immunology, Universiti Kebangsaan Malaysia Medical Centre, Kuala Lumpur, Malaysia
[3]Department of Community Health, Universiti Kebangsaan Malaysia Medical Centre, Kuala Lumpur, Malaysia

BACKGROUND:

The pneumococcus is the commonest causative agent for pneumonia worldwide. In Malaysia, the reported incidence of pneumococcal pneumonia is low due to poor sensitivity of conventional culture methods. The use of BinaxNOW, a urinary antigen test for Streptococcus pneumoniae can aid in the diagnosis of pneumococcal pneumonia.

OBJECTIVE:

To determine the detection rate of pneumococcal pneumonia using BinaxNOW kit and to compare this with the conventional methods of blood and sputum cultures.

METHODS:

This was a prospective cohort study involving patients 18 years and above admitted for community-acquired pneumonia (CAP) or health-care associated pneumonia (HCAP) to UKMMC between December 2011and June 2012. BinaxNOW test, serology for Mycoplasma, Legionella and Chlamydia and cultures from blood/sputum/respiratory tract specimens and other routine investigations were taken.

RESULTS:

102 patients were recruited; 89 patients (87.3%) with CAP, 13 patients (12.7%) with HCAP. 57 patients (55.9%) had unknown aetiology of pneumonia. 11 patients (10.8%) had positive blood cultures. 8 patients (7.8%) had a positive urine BinaxNOW test and 6 patients (5.9%) had positive sputum cultures. Streptococcus pneumoniae was the commonest isolate accounting for 9 cases (8.8%) followed by Klebsiella pneumoniae in 7 cases (6.9%). 8 (out of 9 patients with pneumococcal pneumonia) with positive urine BinaxNOW test had negative cultures for Streptococcus pneumonia. 1 patient grew Streptococcus pneumoniae from tracheal aspirate; however the urine BinaxNOW test was negative.

CONCLUSION:

The use of urine BinaxNOW kit in UKMMC increased the detection rate of pneumococcal pneumonia in hospitalised patients eightfold.

PREVALENCE OF AIRFLOW LIMITATION AMONG CHRONIC SMOKERS USING HAND-HELD SPIROMETER IN A PRIMARY HEALTHCARE CLINIC

S M Ching[1], Y K Pang[2], David Price[3], A T Cheong[1], P Y Lee[1], I Irmi[1], H Faezah[1], H I Ruhaini[4], Y C Chia[2, 5]

[1]Universiti Putra Malaysia, Selangor, Malaysia
[2]University of Malaya, Kuala Lumpur, Malaysia
[3]University of Aberdeen, United Kingdom
[4]District of Sepang, Malaysia
[5]University of Curtin, Australia

INTRODUCTION:

Early diagnosis of COPD in primary care settings is difficult partly due to unavailability of spirometer1. This study aimed to determine the prevalence of airflow limitation among chronic smokers by using a hand-held spirometer in a primary care clinic.

METHODOLOGY:

A cross-sectional study was performed on consecutive patients who were ≥ 40 years old with at least 10 pack-years smoking history irrespective of COPD status from Jan to June 2012. Patients with other airflow limitation diseases were excluded from the study. Hand-held spirometry (COPd-6TM device) was performed according to a standard protocol. The highest reading of the three acceptable measurements was entered into analysis. Airflow limitation was defined as FEV1/ FEV6 <0.752,3. Multiple logistic regressions were used to determine for predictors for the airflow limitation.

RESULTS:

416 patients were recruited (response rate 95%). Prevalence of airflow limitation was 10.6% (n=44). By using multiple logistic regression, older patients were 1.1 times odds (95% CI= 1.028-1.100) more likely to have airflow limitation. Patients who perceived themselves to have bad health currently were 2.6 times (95% CI=1.079-6.432) more likely to have airflow limitation compared to patients who considered themselves to have good health currently. Patients with normal weight and overweight were 3.5 times odds (95% CI =1.432-8.692) and 2.1 times odds (95% CI=1.008-4.554) more likely to have airflow limitation compared to obese patients.

CONCLUSIONS:

This study found that the prevalence of airflow limitation was one in every ten chronic smokers with at least 10 pack-years smoking history. Patients who were older, leaner and perceived themselves to have poor health status were at higher risk of having airflow limitation. Thus, every effort should be made to send those high risk groups for a spirometry test for early detection of COPD.

REFERENCES:

1Bolton CE 2005 2 Koichi Nishimura 20113Fritha P 2011

LUNG FUNCTION TEST IN METABOLIC SYNDROME AND OBESE SUBJECTS WITHOUT METABOLIC SYNDROME IN A LARGE COHORT OF MALAYSIAN POPULATION

M A Mohd Zim, A I Ismail, H Baharuddin, S K Othman, W H Wan Mohammad, H Nawawi, K Yusoff, F Majid, N Abu Bakar, T S T Ismail
Faculty of Medicine, Universiti Teknologi MARA, Selangor, Malaysia

INTRODUCTION
Metabolic syndrome has been shown to contribute to impairment in lung function, possibly due to the ongoing inflammatory process. We undertook this study to investigate whether there are any differences in lung function, as measured by predicted FEV1 and FVC in metabolic syndrome (MS) and obese non metabolic syndrome (NMS), compared with control subjects.

METHOD
1702 subjects who performed lung function tests correctly were recruited. Subjects included were more than 18 years old and we excluded active smokers. Control subjects are those with normal weight who did not have MS. Demographic data were obtained during interview with the patients. The lung function test, height, weight and waist circumference were measured by trained personnel.

RESULTS
There were 618 (36.3%) MS, 404 (23.7%) obese NMS and 680 (40.0%) control subjects. The mean predicted FEV of MS = 78.10 ± 16.63, obese NMS = 77.01 ± 15.25 and control subjects = 76.05 ± 18.13. The mean FVC of MS = 75.6 ± 14.08, obese NMS = 74.75 ± 17.20 and control subjects = 74.56 ± 20.03. We found no significant difference in the means of FEV1 and FVC, in MS and obese NMS, when compared to control subjects.

CONCLUSION
In our cohort, we did not find significant differences in the lung function, as measured by predicted FEV1 and FVC, in subjects with metabolic syndrome and obese subjects without metabolic syndrome, when compared with subjects with normal weight and no MS.

VIRUSES IN CHILDREN WITH ACUTE EXACERBATION OF BRONCHIAL ASTHMA AMONG CHILDREN SEEN IN UMMC

Rakhee Yadav[1], Jessie de Bruyne[1], Anna Marie Nathan[1], Jamal I-Ching Sam[2]

[1]Department of Paediatrics, University Malaya Medical Centre, Kuala Lumpur, Malaysia
[2]Department of Medical Microbiology, University Malaya Medical Centre, Kuala Lumpur, Malaysia

OBJECTIVE

The aim of this study was to determine a) the viruses implicated in and b) the risk factors associated with asthmatic exacerbations in children presenting to University Malaya Medical Centre (UMMC).

METHOD

This was a cross-sectional study in children between the ages of 2-12 years who presented to the Paediatric Trauma and Emergency Department (UMMC) with an acute exacerbation of asthma. Throat swabs and/or nasopharyngeal aspirate were taken and tested for 12 respiratory viruses by multiplex PCR.

RESULT

One hundred and three children were recruited. Fifty-eight percent (58 %) of them required outpatient treatment and 2 children required PICU care. Viruses were detected in 22% of children: Rhinovirus (15%), Respiratory Syncytial Virus (5%) and Bocavirus + Metapneumovirus (2%). Factors associated with severity of asthmatic exacerbation were compliance to medication ($p = 0.02$), regularity of follow-up ($p = 0.04$) and prior asthma control ($p < 0.001$). Presence of virus was not associated with severity of exacerbation or need for admission.

CONCLUSION

There was no association between detection of viruses and severity of exacerbation or need for admission. Poor compliance to medication, absence of follow-up and poor asthma control were associated with more severe asthma exacerbation.

KEY WORDS:

bronchial asthma, exacerbation, severity, virus isolation

DISTRIBUTION OF IL-18 SNPS COMPARED IN NON-ASTHMATICS AND ASTHMATICS IN THE UNIQUE POPULATION OF MALAYSIA

Devika Chinayah[1], V L Raj[2], C K Liam[1], M R Mustafa[1]
[1]University of Malaya, Kuala Lumpur, Malaysia
[2]MAHSA University, Kuala Lumpur, Malaysia

The IL-18 genetic polymorphism at promoter positions -607 (rs1946518), -137 (rs187238), and coding position 105 (rs549908) has been linked with asthma, rheumatoid arthritis and systemic lupus erythematosus.

We tested the hypothesis that the -607, -137 and 105 genetic polymorphisms of IL-18 confer asthma susceptibility. Study subjects were Malaysian non-asthmatics and asthmatics patients of University Malaya Medical Centre.

Our results indicated that the allele frequency of -607 (rs1946518) differed significant in the overall Malaysian population (p = 0.026 and OR of 1.325, 95% CI 1.034- 1.698). When the population was stratified according to ethnicity, significant difference was only seen in the alleles frequency of Indian population (OR, 1.592; 95% CI, 1.022- 2.489, p = 0.039). In the overall Malaysian population, IL-18 -137 (rs187238) showed significant differences across the genotypes with p = 0.008 and frequency of allele with p= 0.002 and OR of 1.673 (95% CI 1.200- 2.332). In the stratified population, significant differences were only seen in the Malay population where both the genotype p= 0.043 and allelic frequency p= 0.019 with OR of 1.88 (95% CI 1.104- 3.207). In the IL-18 105 (rs549908), significant differences were found across the genotypes with p = 0.006 and the allelic frequency p = 0.003 with OR of 0.613 (95% CI 0.442- 0.85) for the overall population. When the population was stratified according to ethnicity, statistical differences were seen only in the Malay population, with p = 0.026 in genotype frequency and p= 0.009 with OR 0.493 (95% CI 0.288- 0.844) in the allelic frequency. Linkage disequilibrium test showed that all the SNPs in this study were in linkage in the overall Malaysian population and in the stratified population. In the Malay population, the haplotype results showed that the combination of T, T and C alleles, respectively from -607 (rs1946518), 105 (rs549908) and -137 (rs187238) were in linkage (OR= 1.684; 95% CI, 1.074 – 2.640; Alleles T, G and G combination for the same sequence of genes had OR of 0.478 (CI: 0.277- 0.827). In the Chinese population all three genes were in linkage, but -607 (rs1946518) and -137 (rs187238) were in absolute linkage (D'=1). Alleles combination of G, T and C, respectively from -607 (rs1946518), 105 (rs549908) and -137 (rs187238) were in linkage (OR, 1.684) but the T, G and G combination for the same sequence of gene (OR, 0.593) as seen in the Malay population. The -137 (rs187238) with -607 (rs1946518) and -137 (rs187238) and 105 (rs549908) are in absolute linkage in the Indian population but the haplotype results showed that the combination of allele G, T, and C has OR of 1.609.

Therefore the Malaysian population is unique in terms of the genetic content of these selected IL-18 polymorphisms because not all ethnicities had the same pattern of significant differences for the predisposition or protection for asthma.

POSTER PRESENTATIONS

ASSOCIATION OF COPD ASSESSMENT TEST (CAT) WITH GOLD GRADE AMONG CHRONIC OBSTRUCTIVE PULMONARY DISEASE (COPD) OUTPATIENTS IN KOTA BHARU, KELANTAN

H Mohamed Hasnan[1], M Z Mat Jaeb[2], N Draman[1], W M I Wan Mohamed[1]

[1]University Science of Malaysia, Kubang Kerian, Kelantan, Malaysia

[2]Hospital Raja Perempuan Zainab II, Kota Bharu, Kelantan, Malaysia

INTRODUCTION

CAT is a simple, patient-self-completed questionnaire to measure the clinical impact of COPD on patient's health. So far, there is no study done to assess the association between CAT in Malay version and GOLD grades.

OBJECTIVES

We would like to determine the association between CAT in Malay version with GOLD grades among stable COPD outpatients in two main hospitals in Kota Bharu, Kelantan. The second objective was to determine the COPD severity by using CAT questionnaire, GOLD grades and combined COPD assessment test.

METHODOLOGY

This was a cross-sectional study performed from October to November 2012 at respiratory clinic, Hospital Universiti Sains Malaysia (HUSM) and Hospital Raja Perempuan Zainab II (HRPZII). Ninety five COPD patients who fulfilled the inclusion and exclusion criteria participated in this study. Written consent was obtained from the patients. After demographic data was collected, patients were asked to fill up the CAT questionnaires. Then, spirometry test was performed. One-way ANOVA was used to assess association between CAT in Malay version and GOLD grade.

RESULTS

Majority of the participants were male (89.5%) and of Malay ethnicity (94.7%), with a mean age of 66.43+/-8.61 years. The association between CAT in Malay version and GOLD grades was statistically significant with p-value = 0.011. Most of our participants had moderate CAT score (51%) with severe airflow limitation-GOLD grade 3 (42%). However, when the combined COPD assessment was applied, majority were in group D (56%).

CONCLUSION

CAT in Malay version was well associated with GOLD grades and COPD assessment test was the most accurate method in assessing COPD severity.

RELATIONSHIP BETWEEN DEPRESSION AND CRP IN CHRONIC OBSTRUCTIVE PULMONARY DISEASE (COPD) PATIENTS

A Musa, S Mohamed, H Basri, T Ismail
Universiti Teknologi MARA, Selangor, Malaysia

INTRODUCTION

COPD is associated with significant comorbidities including psychological factors such as anxiety and depression (Global Initiative for Chronic Obstructive Lung Disease 2006). Depression in COPD is associated with poorer adherence to treatment and smoking cessation (Breslau N et al 1991), poorer participation in pulmonary rehabilitation (Garrold R et al 2006) and increase risk of mortality (Fan VS et. Al 2007).

METHODS

This is a cross-sectional analysis of 60 COPD patients recruited in 2011 from respiratory outpatient clinic. Their socio-demographic data, disease severity, last exacerbation, smoking history, hsCRP, SGRQ and HADS scores were collected and analysed.

RESULTS

Patients studied had a mean age of 69.3±8.7 years old with mean duration of illness of 7.7±6.5 years. 98.3% were males. Majority were Chinese (48.3%) and Malay (43.3%). 21.7% were still actively smoking. 10% had mild disease, 25% had moderate severity, 53.5% were severe and 11.7% were in the very severe disease classified according to FEV1. The mean for last exacerbation history was 13.9±19.9 months.

The mean hsCRP was 4.79±8.8 mg/L,SGRQ total score was 25.3±18.3, and HADS depression score was 4.73±3.79. Only 18.3% had symptoms suggestive of presence of mood disorder and 6.7% had probable presence of mood disorder.

There were no significant correlation seen between hsCRP and age, disease severity, smoking status, exacerbation history, HADS depression scores, HADS anxiety scores or SGRQ scores.

CONCLUSION

This study did not show any significant correlation between hsCRP and depression scores. However, a larger scale study and follow up of these patients are needed to further assess the correlation between CRP and depression scores.

TWO-MINUTE WALK TEST (2MWT): MEASUREMENT PROPERTIES AND CARDIORESPIRATORY RESPONSES IN SEVERE CHRONIC OBSTRUCTIVE PULMONARY DISEASE (COPD)

Fatim Tahirah Mirza[1], Nola Cecins[2, 3], Kylie Hill[1], Sue Jenkins[1, 2]

[1]School of Physiotherapy and Curtin Health Innovation Research Institute, Curtin University, Perth, Western Australia, Australia
[2]Physiotherapy Department, Sir Charles Gairdner Hospital, Perth
[3]Community Physiotherapy Services, Perth, Western Australia, Australia

BACKGROUND

The 2MWT is likely to be an attractive alternative to the six-minute walk test (6MWT) for patients with severe COPD or in acute settings. However, there is a paucity of data pertaining to the measurement properties of this test and no studies have compared the heart rate (HR) and arterial oxygen saturation (SpO2) responses to the 2MWT with the 6MWT.

AIM

To determine the within-day (learning effect) and between-day variability in the two-minute walk distance (2MWD) and to compare HR, SpO2 and dyspnoea responses elicited during the 2MWT and the 6MWT.

METHOD

Eighteen participants (7 males, mean±SD age, 72±8 yrs; FEV1, 30±14% predicted) attended two testing sessions within 14 days. On day 1, participants performed three 2MWTs. On day two, participants performed one 6MWT and one 2MWT, in random order.

RESULTS

Six-minute walk distance and 2MWD were 330±86m and 143±24m respectively, with 11 (73%) and two (13%) participants resting during each test. There was an increase in 2MWD over the three consecutive tests (5±8m [test 2 vs. 1]; $p<0.05$; 3±4m [test 3 vs. 2]; $p<0.01$). The coefficient of repeatability for the 2MWD over two days was 9m. See Table for HR, SpO2 and dyspnoea responses.

Data are mean±SD	2MWT	6MWT	p-value
Peak HR (bpm)	108±12	114±15	0.011
Nadir SpO2 (%)	85±5	81±6	0.006
Peak Dyspnoea	4±1	5±1	0.005

CONCLUSION

Repeated 2MWTs on the same day have a very small learning effect that is unlikely to be clinically important. In an individual patient, the 2MWD would need to change by more than 9m to be 95% confident that this difference was not the result of natural variability in test performance. Compared to the 6MWT, 2MWT elicited more modest HR, SpO2 and dyspnoea responses and appears to be better tolerated.

BALANCE PERFORMANCE AMONG ELDERLY COPD PATIENTS IN UKMMC

Ayiesah R[1], Neoh N C[1], Riza Sharom A R[2]

[1]Physiotherapy Programme, Faculty of Health Sciences, Universiti Kebangsaan Malaysia, Kuala Lumpur, Malaysia
[2]Department of Physiotherapy, Darul Ehsan Medical Centre, Selangor, Malaysia

INTRODUCTION

COPD is a disease mostly involving the elderly patients in whom there is a high probability of impaired balance due to poor musculoskeletal control.

METHODOLOGY

This cross sectional study was done to identify the risk of fall and to determine balance performance among elderly COPD patients in Universiti Kebangsaan Malaysia Medical Center (UKMMC).

RESULTS

There were 50 subjects with different stages of COPD with mean age of 71±6.54 years, comprising 82% (n=41) males and 18% (n=9) females. Among the ethnic groups 64% (n=32) were Chinese, 32% (n=16) Malay and 4% (n=2) Indian. Each subject was assessed with Timed Up and Go test (TUG) for dynamic balance and Peninsula Fall Risk Assessment Tool (FRAT) for risk of fall. Findings showed reduction in dynamic balance as TUG time was higher than expected compared to normal reading (<10s). Reduction of dynamic balance correlated with severity of the disease ($p=0.039$, $r^2=0.011$) but not with age ($p=0.174$), FRAT score ($p=0.107$) and history of fall ($p=0.169$). FRAT demonstrated 4 (8%) subjects had high risk of fall while others had low risk of fall. FRAT score did not correlate with severity of disease ($p=0.750$) and age ($p=0.841$). Ten subjects (20%) had fallen at least once in the past one year. However, FRAT is not a suitable tool to assess fall risk among COPD patients as the clinical features and systemic effects of COPD cannot be assessed in FRAT.

CONCLUSIONS

Elderly COPD patients exhibit deficiency in dynamic balance which is associated with disease severity but is not influenced by age. This study suggests that assessment of dynamic balance should be incorporated in pulmonary rehabilitation program.

KEYWORDS:

Falls; Balance; COPD; Elderly; Assessment tool

PP5

CORRELATION BETWEEN BLOOD PRESSURE AND LUNG FUNCTION IN A GENERAL ADULT MALAYSIAN POPULATION

N Y Esa, M A Md Zim, H Baharuddin, A I Ismail, M Rodi, F Majid, N A Bakar, K Yusoff, T Ismail
Faculty of Medicine, Universiti Teknology MARA, Selayang Campus, Selangor, Malaysia

BACKGROUND
Several studies have shown an association between high blood pressure and reduction in lung function. The aim of this study is to determine whether high blood pressure and anti-hypertensive medication have an adverse effect on lung function in a general adult Malaysian population.

METHODS
As part of health screening program, a cross sectional study was conducted in several rural, urban peninsular and east Malaysia. All subjects completed a questionnaire, underwent spirometry testing and blood pressure measurement. The spirometry test was conducted based on ATS standardisation for spirometry and subjects unable to meet the criteria were excluded from the study. Multiple variable regression models were applied to study the association between blood pressure, treatment status and lung function test.

RESULTS
A total of 1984 subjects were included in the study. 42.7% were males and 57.3% were females with mean age 52.31 ± 10.04. There was a significant negative correlation between systolic blood pressure and FEV1% predicted (beta= -0.036 ,p= 0.023) and FVC % predicted (beta= -0.042 p=0.017). However, there was no significant correlation between diastolic blood pressure and FEV1 % predicted and FVC % predicted. Anti-hypertensive treatment also had no significant correlation with FEV1 predicted and FVC% predicted.

CONCLUSION
This study showed a negative correlation between systolic blood pressure and lung function. Anti-hypertensive drugs had no correlation with FEV1 predicted and FVC predicted.

This study was supported by Ministry of Science, Technology and Innovation, Malaysia

PP6

(WITHDRAWN)

THE EFFECTIVENESS AND SAFETY OF MECHANICAL PERCUSSOR COMPARED WITH CONVENTIONAL PHYSIOTHERAPY IN ADULTS WITH PRODUCTIVE COUGH

Punithavathi Narayanan[1], Ong Loke Meng[1], Irfhan Ali bin Hyder Ali[2], Mohd Izmi bin Ahmad @ Ibrahim[3], Dharminy Thurairatnam[1], Ang Ah Heong[1], Hadzlinda Zainal[1]

[1]Clinical Research Centre, Penang Hospital, Penang, Malaysia
[2]Department of Respiratory Medicine, Penang Hospital, Penang, Malaysia
[3]Department of Rehabilitation Medicine, Penang Hospital, Penang, Malaysia

INTRODUCTION

Conventional Chest Physiotherapy (CCPT) remains the mainstay of treatment for sputum mobilisation in patients with productive cough. However it requires the assistance of a physiotherapist and limits the independence of patients. Mechanical percussors might provide greater autonomy and compliance.

We conducted a randomised crossover trial to compare the efficacy and safety of a mechanical percussor, Lega®, (MP) with CCPT with respect to sputum production and changes in lung function in adults with productive cough.

METHODOLOGY

Patients with COPD or bronchiectasis were each given 3 daily sessions of CCPT and 3 daily sessions of percussion with MP. Randomisation was performed on the first and fifth day. The sputum produced during 15 minutes of treatment and 5 minutes after treatment were measured

RESULTS

Twenty patients, mean age 64 years old, were enrolled. CCPT induced more sputum compared with MP (mean dry and wet weights of sputum for CCPT were 0.72g and 11.85g versus 0.49g and 6.73g for MP respectively, $p<0.001$ between groups). There were no significant differences in FEV1, FEV1/FVC ratio, respiratory rate, oxygen saturation, blood pressure or pulse rate between groups. Mild pain and exhaustion were reported by 5.6% and 11.1% of patients respectively with MP versus 16.7% and 27.8% with CCPT (p=NS between groups). More patients preferred MP to CCPT (63% vs 37% respectively). The commonest reason for the preference for MP was comfort. 89.5% of patients were happy to use MP by themselves. No serious adverse events were reported.

DISCUSSION/CONCLUSION

Although MP induced less sputum compared with CCPT, respiratory function tests were similar. The device was well received and tolerated by the patients. There were no safety concerns. In conclusion, the mechanical percussor device is well tolerated and will be a useful adjunct to conventional chest physiotherapy.

OBSTRUCTIVE SLEEP APNOEA: A MALAYSIAN PERSPECTIVE

Mau-Ern Poh*, Yong-Kek Pang, Chong-Kin Liam, Ken-Siong Kow, Raymond-George Varughese, Chee-Kuan Wong, Keong-Tiong Chua

Division of Respiratory Medicine, Department of Medicine, Faculty of Medicine, Universiti Malaya, Kuala Lumpur, Malaysia

INTRODUCTION

Obesity and craniofacial anomalies are among identified risks of obstructive sleep apnoea (OSA). While obesity is a major risk in Caucasians, craniofacial anomalies may be more important among Asians.

OBJECTIVE

To determine the correlation between the severity of Apnoea-Hypopnoea Index (AHI) and Epworth Sleepiness Scores (ESS) with Body-Mass-Index (BMI) and Craniofacial anomalies.

METHODS

This is a cross-sectional study of consecutive new/existing patients with a diagnosis of OSA who attended our respiratory clinic at UMMC from 1st September 2012 to 15th April 2013. The ESS were tabulated from the Epworth Sleepiness Questionnaire. AHI is obtained from their polysomnography. Craniofacial anomalies examined included micrognathia, retrognathia, macroglossia, overjet/overbite of teeth, enlarged tonsils, Mallampathi scores and large uvulas. Their BMIs were calculated using weight and height recorded at initial diagnosis.

RESULTS

A total of 57 patients were recruited - 33 males and 24 females. Thirty two patients (56%) had severe OSA (AHI > 30), 20 patients (35%) had moderate OSA (AHI 16 to 30) and 5 patients (9%) had mild OSA (AHI 6-15). Patients with large uvula and higher Mallampathi scores (3/4) were found to have a higher AHI (means 48.5 and 43.9 respectively) compared to those without/lower scores (means 34.5 and 27.5, respectively; $p < 0.05$) whereas patients with macroglossia had higher ESS ($p<0.05$). Besides, patients with moderate to severe OSA (AHI >15) had a higher mean neck circumference compared to those with mild disease - mean 42.4cm versus 36.9cm. We found a positive correlation between BMI and the number of craniofacial anomalies ($R= 0.414$, $p=0.01$). However, there was no correlation between BMI and AHI or ESS (regardless of their gender).

CONCLUSIONS

Craniofacial anomalies such as macroglossia, large uvula, high Mallampathi scores, and higher neck circumference are related to higher ESS/AHI. BMI, however, did not correlate well with ESS/AHI.

MALAY VERSION EPWORTH SLEEPINESS SCALE

A I Ismail, A M Daher, T S Ismail
Faculty of Medicine, Universiti Teknologi MARA, Selangor, Malaysia

INTRODUCTION
The prevalence of sleep disordered breathing (SDB) is high in Malaysian population and is associated with significant morbidity. The standardised assessment of hypersomnolence by questionnaire is important for clinical management of affected patients as well as for research purposes. Among the questionnaires for initial evaluation, the Epworth Sleepiness Scale (ESS) has been acknowledged because it is simple, easy to understand, rapidly completed and carefully validated.

OBJECTIVE
The main aim of this study is to translate and validate the ESS for use in Malay-speaking patients.

METHODS
A Malay translation of the ESS (My-ESS) was administered to 60 patients with various sleep disorders attending multidisciplinary Sleep Clinic. All patients were subsequently subjected to Polysomnography (PSG) to confirm the presence of Obstructive Sleep Apnoea (OSA).

RESULTS
The 8-item scores of My-ESS had an overall reliability coefficient (Cronbach alpha) of 0.823, comparable to previous German (0.83) and Portuguese (0.83) translated versions. Of the 60 patients included, 25 had My-ESS score of ≤ 10, though only 5 of them had normal polysomnography (AHI < 5). 35 patients had My-ESS score of ≥ 11, and all of them were confirmed to have OSA, 3 in mild category (AHI 5-15), 3 in moderate category (AHI 15-30), and 29 in severe category (AHI > 30).

DISCUSSION
The result of this study demonstrate that My-ESS is a valid and reliable tool for assessment of daytime sleepiness, equivalent to its original version when applied to Malay-speaking patients. Despite its reliability in diagnosing OSA in sleepy patients, further study is required to explain the apparent lack of specificity in non-sleepy patients. The highly selected group of patients attending the multidisciplinary Sleep Clinic may have influenced the findings.

IS OBESITY HYPOVENTILATION SYNDROME A MANIFESTATION OF MORE 'SEVERE OBSTRUCTIVE SLEEP APNOEA'?

Ken-Siong Kow*, Yong-Kek Pang, Mau-Ern Poh, Chong-Kin Liam, Raymond George Varughese, Chee-Kuan Wong, Keong-Tiong Chua

Division of Respiratory Medicine, Department of Medicine, Faculty of Medicine, Universiti Malaya, Kuala Lumpur, Malaysia

INTRODUCTION

Obesity Hypoventilation Syndrome (OHS) and Obstructive Sleep Apnoea (OSA) share similar risk factors - obesity and upper airway anomalies. OSA and OHS are said to be at different spectrums of a continuum of sleep-disordered breathing - where OHS is a "more severe OSA".

OBJECTIVE

To study if OHS is a more severe form of OSA by examining their clinical manifestations, Epworth Sleepiness Scores (ESS), Apnoea-Hyponoea Index and the number of upper airway anomalies.

METHOD

This is a cross-sectional study of consecutive new/existing patients with a diagnosis of OSA and/or OHS who attended our respiratory clinic at UMMC from 1st September 2012 to 15th April 2013.

The ESS was calculated from the Epworth Sleepiness Questionnaire, whereas AHI was obtained from their polysomnographs. Twelve pre-specified upper airway anomalies were assessed. Their BMIs were calculated based on weight and height recorded at initial diagnosis.

RESULTS

A total of 63 patients were recruited. Fifty seven (90.5%) had lone OSA and only 6 patients (9.5%) had OHS. The mean ages were 61 and 55 years for OHS and OSA, respectively. Males were more likely to have OSA (58%), whereas females had a higher chance of OHS (66.7%).

OHS patients had greater means for BMI (44.8 versus 34.9 kg/m2, p=0.4), neck circumference (44.9 versus 41.9 cm, p=0.425), ESS (19 versus 16, p=0.176), number of daytime symptoms (4 versus 3, P=0.518) and number of upper airway anomalies (6 versus 4, p=0.007). However, the mean AHI were quite similar in both OHS (40.78) and OSA (42.8).

CONCLUSIONS

This study shows that compared to lone OSA, OHS patients are more obese, have more upper airway anomalies and are more symptomatic during daytime with higher ESS. We were surprised to find similar mean AHIs for both conditions.

HEART RATE VARIABILITY IN PATIENTS WITH OBSTRUCTIVE SLEEP APNOEA

A I Ismail, S N A Zahari, M A Md Zim, W H W Mohamed, T Ismail
Faculty of Medicine, Universiti Teknologi MARA, Selangor, Malaysia

INTRODUCTION

The risk of cardiovascular disease in patients with untreated obstructive sleep apnoea (OSA) has been well established. The adverse outcome from OSA has been attributed to the changes in sympathetic tone secondary to repetitive intermittent hypoxia occurred during observed apnoeic/hypopnoeic episodes. Heart rate variability (HRV) represents autonomic cardiac dysfunction related to respiratory events during these episodes. HRV can be determined from continuous ECG recordings and despite its limitation, is useful for assessing risk of cardiovascular death or arrhythmic events.

OBJECTIVE

To identify the correlation between HRV and AHI severity among patients with OSA attending our multidisciplinary sleep clinic.

METHODS

We studied 60 consecutive overnight polysomnography of patients attending our clinic from July 2011 to March 2012. We calculated HRV by measuring beat-to-beat variability between minimum and maximum overnight heart rate using R-R interval.

RESULTS

The study population had a higher number of males and severe OSA patients [43 male, 39 severe OSA, mean (95%CI) age 47.2(43.4 – 51.0), BMI 34.9(32.7 – 37.1), AHI 44.3(37.0 – 51.6)]. Our study showed a positive correlation between HRV and severity of AHI, r = 0.122, p value = 0.004, controlling for age and BMI [mean differences (95%CI) between mild-moderate vs. severe group, age 46.8(39.3 – 54.3) vs. 47.4(43.1 – 51.7), BMI 33.9(29.2 -38.6) vs. 35.3(33.0 – 37.6)].

DISCUSSION

In patients with OSA, HRV correlates with severity of AHI reflecting worsening autonomic cardiac dysfunction in the most severe patient. This possibly relates to severity of intermittent hypoxia and more frequent arousal during sleep. Further studies are required to assess the effect of treatment in reversing these observed changes.

THE EFFECTS OF CONTINUOUS POSITIVE AIRWAY PRESSURE IN OBSTRUCTIVE SLEEP APNEA PATIENTS: APNEA-HYPOPNEA INDEX, DAYTIME SLEEPINESS AND BLOOD PRESSURE CHANGES

Rashidah Y, Adib M N, Mastura M R, Fauziah L, Ashari Y
Sleep Clinic, Institute of Respiratory Medicine, Kuala Lumpur, Malaysia

INTRODUCTION

Obstructive sleep apnea (OSA) is characterised by repetitive episodes of upper airway obstruction during sleep. Optimal treatment of OSA with continuous positive airway pressure (CPAP) will reduce the number of respiratory events during sleep and improve daytime sleepiness, quality of life and cardiovascular risk.

OBJECTIVES

The aim of the study was to determine the effects of pre and post CPAP therapy on patients diagnosed with moderate and severe OSA, particularly at the apnea-hypopnea index (AHI), Epworth Sleepiness Scale (ESS), systolic blood pressure (SBP) and diastolic blood pressure (DBP).

METHODOLOGY

This is a 3-year retrospective cohort study of patients with moderate and severe OSA diagnosed based on polysomnography in Sleep Clinic, Institute of Respiratory Medicine. Patients included in the study were those prescribed CPAP from 1st January 2010 to 31st December 2012. The AHI from polysomnography, ESS for excessive daytime sleepiness and BP before and after the CPAP therapy were analysed based on the patients' notes.

RESULTS

A total of 81 patients were included, with almost equal number of male and female patients (58% and 42% respectively). The mean age was 54.7 ± 10.6 years. However, only 48 patients who were compliant to CPAP therapy were analysed. The effects of CPAP were seen among these patients who used CPAP more than 4 hours a night, for at least 3 months. The initial mean AHI was 44.89 ± 23.90/h, and this was reduced significantly to 4.04 ± 1.92/h ($p<0.001$). The mean ESS also decreased compared to baseline (pre: 12.7 ± 3.9 and post: 6.8 ± 3.1, $p < 0.001$). The mean SBP improved 6.6% after CPAP therapy (pre: 136.2 ± 17.9, post: 127.2 ± 21.7, $p < 0.05$).

CONCLUSION

This study confirmed that OSA patients who are compliant to CPAP therapy show significant improvement of the AHI, ESS and SBP.

CORRELATION BETWEEN DISEASE ACTIVITY AND CARDIOPULMONARY COMPLICATIONS IN SCLERODERMA

W A Syahril W A[1], Mohd Shahrir M S[2], Syahrul S S[2], Yu-Lin A B[2]

[1]International Islamic University, Kuantan, Pahang, Malaysia
[2]Universiti Kebangsaan Malaysia, Kuala Lumpur, Malaysia

OBJECTIVE

This study was aimed at determining the sociodemographic data, the correlation between disease activity and extent of organ damage and the clinical parameters that determine the severity of cardiopulmonary complications of Scleroderma.

DESIGN AND METHOD

Patients' sociodemographic data were recorded with blood testing, echocardiogram, full lung function test, 6-minute walking test and HRCT Thorax.

RESULTS

The study included a total of 43 patients with a median age of 52.0 years and median duration of illness of 10.0 years, female 90.7% and male 9.3% with predominantly limited scleroderma (74.7%). Majority of HRCT findings showed lung fibrosis with ground glass opacities (74.4%). Pulmonary hypertension was predominantly mild (36-45 mmHg), 31.7%, lung function test showed 36.1% restrictive lung disease, and DLCO was reduced (median 13.85). 6-minute walking test distance was also reduced (median 300.0 metres). HAQ scoring showed patients were predominantly in the mild to moderate disability group (median score of 0.5). There was no significant association between EScSG scoring and other clinical parameters. There was a positive correlation between FVC best/predicted and pulmonary artery pressure ($r = -0.346$, p value 0.042), and between HAQ score and FEV1/FVC (%) ($r = 0.439$, p value 0.007), and also HAQ score and DLCO-VA ($r = -0.347$, p value 0.045). There were also significant correlation between HAQ score and total Rodnan skin score ($r = 0.671$, p value < 0.001), and HAQ score with Pain score ($r = 0.515$, p value < 0.001) and Health score ($r = 0.377$, p value 0.013).

CONCLUSION

Scleroderma is rare and occurs predominantly in females, with limited SSc form. Pulmonary fibrosis is common with NSIP changes; and also sub-normal DLCO in lung function tests, with reduced 6-minute walking test distance.

CHARACTERISTICS OF PATIENTS SUFFERING FROM LUNG MALIGNANCY IN KUCHING : A RETROSPECTIVE STUDY

J L Wong[1], P J Voon[2] , K L Yu[2], Y L Ting[1], Michael Dangat P C[1], Edward Jahai C[1], Matlan M[1], Rahman Abdul N H[1], Suhaili S[1], S T Tie[1]

[1]Respiratory Unit, Department of Medicine, Sarawak General Hospital, Kuching, Sarawak, Malaysia
[2]Department of Oncology and Radiotherapy, Sarawak General Hospital, Kuching, Sarawak, Malaysia

INTRODUCTION

The incidence of lung malignancy has increased in the past 10 years due to increased prevalence of smoking. The patients often present late and this is associated with poor outcome. Adenocarcinoma is now the most common histological subtype worldwide and in Malaysia. It is traditionally thought that adenocarcinoma of the lung is more common in non-smokers and female patients. We describe the characteristics of patients who suffering from lung carcinoma that were diagnosed by our centre from November 2011 to February 2013.

METHODS

This is a retrospective study. All patients that were seen in the respiratory unit during the study period who were suffering from lung malignancy were included. Their characteristics were obtained from their clinic cards.

RESULTS

A total of 93 patients was included in the analysis. Adenocarcinoma was found in 53% (n=49) of cases and squamous cell carcinoma in 25% (n=23). Overall, males (69%, n=64) and smokers (56% n=52) were more likely to suffer from lung carcinoma; however, females (OR 2.48 p=0.048) and non-smokers (OR 7.09, p<0.001) were more likely to have histological subtype of adenocarcinoma. Eighty percent (n=74) of patients presented with unresectable disease and right upper lobe was the most commonly involved lobe. EGFR mutation were detected in 57% (n=20) of adenocarcinoma patients. The average duration of symptoms before diagnosis is 97 days.

CONCLUSION

Adenocarcinoma is now the most common histological subtype of lung carcinoma seen in Kuching population. Incidence of lung carcinoma is higher in smokers than in non-smokers. Majority of the patients presented in advanced unresectable stage with prolonged symptoms before diagnosis.

EGFR STATUS AMONG PATIENTS SUFFERING FROM ADENOCARCINOMA OF THE LUNG IN KUCHING: A RETROSPECTIVE STUDY

J LWong[1], P J Voon[2], K L Yu[2], Y L Ting[1], Michael Dangat P C[1], Edward Jahai C[1], Matlan M[1], Rahman Abdul N H[1], Suhaili S[1], S T Tie[1]

[1]Respiratory Unit, Department of Medicine, Sarawak General Hospital, Kuching, Sarawak, Malaysia
[2]Department of Oncology and Radiotherapy, Sarawak General Hospital, Kuching, Sarawak, Malaysia

INTRODUCTION

Adenocarcinoma is now the most common histological subtype of lung malignancy diagnosed in Kuching and Malaysia. Its treatment has evolved from the conventional chemotherapy to targeted therapy in line with the aim of personalising anticancer treatment. EGFR is one of the molecular targets for therapy and its mutation is an established predictive factor for the use of tyrosine kinase inhibitors (TKIs). The incidence of its mutation across Exon 18 to Exon 21 varies according to gender, race and smoking status. The aim of our study is to describe the characteristics of patients with EGFR mutation compared to EGFR wild type.

METHODS

This is a retrospective study. All patients diagnosed to have adenocarcinoma of the lung with EGFR status tested who were seen in respiratory unit during the study period from November 2011 to February 2013 were included. Patient characteristics were obtained from their clinic cards.

RESULTS

A total of 53 patients suffering from adenocarcinoma of the lung were seen during the study period. Eighteen patients (34%) were excluded as EGFR status was not tested. Thirty-five patients (66%) had clinical data available for analysis. Among the 35 patients, non-smokers had the highest OR 11.3 (p=0.0035) for detection of EGFR mutation. Chinese had higher incidence of EGFR mutation compared to other races with OR of 8.25 (p=0.02). Female sex had an OR of 3.2, but this was not statistically significant (p=0.1317). Age, stage at diagnosis, location of the tumour and the presenting complaint did not predict the mutation status of the EGFR receptor. The most common mutation found was deletion in Exon 19.

CONCLUSION

Our analysis showed that non-smokers and females more commonly had EGFR mutation. The study also showed that Chinese had a higher incidence of EGFR mutation.

SAFETY OF RIGID BRONCHOSCOPY UNDER GENERAL ANAESTHESIA

L Ahmad Fisal[1,2], A Samsudin[1], M Z Nasaruddin[1], S E S Syed Haidzir[1,3], M K Razak[1], J A Abdul Rahaman[1]

[1]Respiratory Unit Serdang Hospital, Selangor, Malaysia
[2]Universiti Putra Malaysia, Selangor, Malaysia
[3]Angkatan Tentera Malaysia, Kuala Lumpur, Malaysia

BACKGROUND AND AIM

Rigid bronchoscopy (RB) has experienced a renaissance owing to the development of interventional pulmonology. RB has many advantages but is potentially dangerous leading to reservation amongst the pulmonology community in adopting this procedure as a routine. The aim of this study was to identify the rate of complications of RB and explore any risk factors for increased complications.

METHODS

Data from 80 RB cases performed at our Respiratory Unit from December 2011 to March 2013 were retrospectively analysed.

RESULTS

Sixty-seven patients had 80 RBs. The age range was 17 to 79 years old (median 57 years). There were 51 males (76.1%). Most cases were in ASA classes I & II (77.6%), had ECOG performance score of 2 or less (78.4%) and presented with respiratory-related symptoms (74.6%). Commonest procedures were biopsies (65.2%) & TBNA (56.1%). The overall rate of intra-operative complication was 30.1% (bleeding 16.3%, desaturation 5%, hypotension 11.3%) and post-operative complication rate was 7.5%. Three cases required post-procedure endotracheal tube insertion and mechanical ventilation for laryngoedema, severe bleeding and iatrogenic pneumothorax. There were no fatal complications in this analysis. The median recovery room time was 76.6 minutes and most cases were discharged within 24 hours post-procedure (81.3%). Complications occurred more commonly in cases with poor ECOG status (p=0.025). Other factors such as age, gender, ASA class, presentation, indications, location of lesion, diagnostic procedure and diagnosis were not associated with increased rate of complications.

CONCLUSION

Our survey showed that rigid bronchoscopy under general anaesthesia is a safe procedure, where relatively few complications were attributed to the bronchoscopic procedure and were reversible. The overall status of the patients should be assessed prior to the procedure and extra care should be given to patients with poor performance status.

EBUS-TBNA HISTOLOGY AND CYTOLOGY: COULD WE CONCENTRATE ON ONE ONLY?

Hilmi Lockman[1,2], Andrew Medford[2], Jonathan Bennett[2]

[1]Faculty of Medicine and Health Sciences, Islamic Science University of Malaysia, Kuala Lumpur, Malaysia
[2]Southmead Hospital, Bristol, United Kingdom
[3]Glenfield Hospital, Leicester, United Kingdom

INTRODUCTION

EBUS TBNA is a useful diagnostic tool in obtaining tissue samples for diagnostic and staging purposes in lung cancers. The cell typing process differs in each centre.

BACKGROUND

We were trying to determine if there is a significant difference between the needle cores and needle washings results in determining the pathology of the disease. In our centre, the needle cores (using a 21G TBNA needle) are collected into a formalin pot followed by the needle flushes (by 0.9% saline) into a Cytolyt (Cytyc UK, Crawley, West Sussex, UK) fluid and analysed separately.

METHODS

A retrospective review of all of the EBUS procedures performed at Glenfield Hospital, UK over a 1 year period (20 April 2012 – 19 April 2013) were reviewed. A total of 215 EBUS procedures were carried out.

RESULTS

75 EBUS procedures yielded a positive diagnosis of malignancy. In 9 cases (12%) the cytology was negative and histology positive. Out of this 2 (2.7%) had suspicious histology. 8 (10.6%) had positive histology with suspicious cytology. Only 2 (2.7%) had negative histology but positive cytology.

SUMMARY

The findings suggest that the cores for EBUS-TBNA yield a better pathological diagnosis compared to cytology from the needle washings. This might suggest that we could consider not performing needle cytology in cases of diagnosis for lung malignancy

COMPUTED TOMOGRAPHY GUIDED PERCUTANEOUS TRANSTHORACIC BIOPSIES: A 3 YEARS REVIEW

C K Ong, Lalitha P, Kumaresh R, Irfhan A
Department of Respiratory Medicine, Penang Hospital, Penang, Malaysia

INTRODUCTION
Computed tomography (CT) guided percutaneous transthoracic biopsy has become the procedure of choice for diagnosis of pulmonary lesions.

OBJECTIVE
To evaluate the diagnostic accuracy and complications of CT guided percutaneous transthoracic biopsies of pulmonary lesions.

METHOD
Consecutive patients who underwent diagnostic CT guided percutaneous biopsies of pulmonary lesions between January 2010 and December 2012 were included. 16 / 18 / 20 G biopsy needles were used. Evaluation included clinical data, pathologic results and therapeutic consequences. Statistical analysis of factors related to patient characteristics, lung lesions, and biopsy technique was performed to determine possible contribution to the occurrence of pneumothorax.

RESULTS
A total of 204 patients (143 males, 61 females) with mean age of 59.5 ± 14.0 years were included in the study. Mean diameter of lung lesion was 44.4 ± 14.5 mm. Mean depth of lung lesion was 14.4 ± 6.9 mm. Biopsies samples were adequate in 198 patients (97.1%) and inadequate in 6 patients (2.9%). The overall diagnostic accuracy was 93.6%. For malignant lesions, biopsy was positive in 161 patients (sensitivity of 97.6%) and for benign lesions, in 30 patients (sensitivity of 78.9%). Pneumothorax was observed in 30 patients (14.7%) and 3 of them (1.5%) required a chest drain. The significant risk factors for pneumothorax were lesion depth > 20 mm ($p < 0.0001$), pathology type (malignant; $p < 0.0001$), larger needle size ($p < 0.0001$), number of passes > 2 ($p=0.001$), lesion size < 30 mm ($p=0.009$). There were no haemothoraces or major bleeding complications. However, post-interventional local hemorrhages were observed in 9 patients (4.4%).

CONCLUSION
Percutaneous transthoracic CT guided biopsies of lung lesions were an effective and relatively safe procedure for the diagnosis of lung lesions.

PNEUMONIA DURING HAJ IN SYISYAH HOSPITAL, MAKKAH.

Razak A M[1], Sharifah Suryani[2], Azah A S[3], Matnoh K[4], Suzalinna S[5], Noor Shahieddah F[6]

[1]Institut Perubatan Respiratori, Kuala Lumpur, Malaysia
[2]Hospital Sultan Ahmad Shah, Temerloh, Pahang, Malaysia
[3]Klinik Kesihatan Pantai, Kuala Lumpur, Malaysia
[4]Klinik Kesihatan Kemaman, Terengganu, Malaysia
[5]Klinik Kesihatan Kuching, Sarawak, Malaysia
[6]Hospital Likas, Sabah, Malaysia

INTRODUCTION

Annually, millions of Muslims embark on a religious pilgrimage to Makkah and Madinah. Tabung Haji, Malaysia, the main body for the Haj mission, arranges for about 30,000 Malaysians to go on this pilgrimage annually. During the last Haj season, 875 Malaysian pilgrims were admitted in the two hospitals in Makkah, of which, in Syisyah Hoapital, there were 503 admissions. Three major causes of admissions in Syisyah were chest infections (336), diabetic complications (47) and cardiovascular diseases (33).

METHOD

A descriptive study of pilgrims admitted to Syisyah Hospital for pneumonia for the month of September to October 2012.

RESULTS

There was a total of 142 admissions, male 78 (54.9%), female 64 (45.1%), with mean age of 69.9 years of age. Hypertension, diabetes and ischaemic heart disease were the common co-morbidities, in 57%, 25% and 17% respectively, while asthma and COPD was noted in 18% and 12% respectively. The causative organisms were K. pneumonia (9.9%), P. aeroginosa (4.9%), Streptococcus and E. coli making up 0.7% each. There was only one death and four cases were transferred to a Arab hospital for ventilation, of which 2 died there. Three commonly used antibiotics were Augmentin plus Azithromycin combination (21%), Levofloxacin (15.5%) and Augmentin monotherapy (12.7%). There was no statistically significant correlation between age, sex and co-morbidities with the number of days admitted.

CONCLUSION

Pneumonia is the commonest cause for admission during the Haj season. Overcrowding, with close proximity in small rooms and tents play an important role in disease transmission. The outcomes of treatment were good in this study with only one death in the Malaysian hospital and two in the Arab hospital. There was no correlation between age, sex and antibiotic use and number of days admitted in these patients.

POST SEVERE ADENOVIRUS INFECTION BRONCHIOLITIS OBLITERANS IN PREVIOUSLY HEALTHY CHILDREN

A R Noor Zehan, S C Su, H Nazatul, R Norshireen Nazli, Norzila M Z
Department of Paediatrics, Paediatric Institute, Hospital Kuala Lumpur, Kuala Lumpur, Malaysia

INTRODUCTION
Bronchiolitis Obliterans (BO) in children is an infrequent chronic and obstructive lung disease secondary to an insult to the terminal airway and its surroundings. Severe adenovirus is by far the commonest agent linked to the development of post-infectious BO.

OBJECTIVE
To describe the clinical presentation, radiological manifestations and development of BO following severe adenovirus infection of previously healthy children admitted to Pediatric Institute Kuala Lumpur Hospital from February till April 2013.

RESULTS
There were a total of 12 patients referred to the Paediatric Respiratory team for evolving BO with oxygen dependency. Mean age of the patients were 15.4 months. All patients presented with symptoms of bronchopneumonia. Three of the patients also had encephalitis and 1 had wrist drop as a sequelae. Two of these patients required prolonged ventilation. 5 patient required non-invasive ventilatory support (NIV). All patients received antibiotics at time of presentation. They also received human immunoglobulin (IVIG) during the course of stay in the hospital. The initial radiological manifestations were mainly bilateral interstitial infiltrates and segmental pneumonia. Seven patients who received invasive and NIV support had a CT thorax done and the findings confirmed BO. Five patients with confirmed BO were discharged with home oxygen therapy. Two patients who presented with encephalitis are still in the ward on NIV with oxygen supplementation.

CONCLUSIONS
Patients who presented with extra-pulmonary manifestations and those requiring intensive care with ventilatory support were more likely to develop BO. It is noted that rapid progression of the clinical course despite antibiotics and IVIG with the presence of unusual extra-pulmonary symptoms may suggest the diagnosis of severe adenovirus infection.

PAEDIATRIC EMPYEMA THORACIS: EARLY INTERVENTION SAVES LIFE

M Fauzi, Ramli A, A Basheer A, M Hamzah
Department of Cardiothoracic Surgery, Penang Hospital, Penang, Malaysia

INTRODUCTION

Empyema Thoracis is purulent pleural collection and it is a dynamic process. It can be a life-threatening emergency in paediatric surgical practice. In this population, the most frequent etiology is parapneumonic effusion. With effective use of broad-spectrum antibiotics, the incidence has declined but it still remains a significant health problem due to inadequate treatment. There is lack of evidence on base criteria for optimal timing of surgical intervention (decortication). Therefore the management of this condition remains controversial and awareness on early diagnosis and surgical intervention is crucial.

METHOD

A retrospective study was done of empyema thoracis cases with complication of multiorgan failure in the Paediatric Intensive Care unit of the Cardiothoracic Department at Penang Hospital. We also studied the duration of ventilation support post surgery and duration of hospital stay.

RESULT

The data showed early surgical intervention (decortication) greatly improved the morbidity and mortality. It also showed reduced duration of ventilation support post surgery and hospital stay. However, a larger sample size will be needed for a more conclusive finding.

CONCLUSION

Delay in seeking medical help and referral determined the late stage on presentation. Early referral for surgical opinion is advocated. Immediate surgical intervention (decortication) saved patients' lifes. Even with our vast experience in thoracic surgery, paediatric empyema is one of the challenging conditions to manage. We would like to stress that early and accurate diagnosis and early intervention greatly reduce morbidity and mortality.

IS OPEN THORACOTOMY STILL A VIABLE TREATMENT OPTION FOR THE MANAGEMENT OF PAEDIATRIC EMPYEMA THORACIS? AN 11-YEARS EXPERIENCE

A R Ismail, A L Mohd Alkaf, J V Simon, S H S Rasul, M M Norhaimaz, M Velmuthu, A Jefri, A R Mohd Fahim

Department of Cardiothoracic Surgery, Hospital Sultanah Aminah Johor Bahru, Johor Bahru, Johor, Malaysia

INTRODUCTION

The incidence of empyema thoracis in paediatric age group is uncommon accounting for about 0.6% of hospitalised pneumonia. As a subsequent option when medical treatment with antibiotic administration and thoracostomy has failed, conventional open thoracotomy is the only option left. However, this approach can cause protracted effects. This study aimed to find out whether open thoracotomy is still a viable option for the management of paediatric empyema thoracis.

METHODOLOGY

There are 40 cases of open thoracotomy performed at our centre for paediatric empyema thoracis within a 11-year period. However, only twenty of them were included in this study. The median age of patients was 4.5 years (4.6).

RESULTS

The median time of clinical presentation to paediatric unit was 7 days (9 days), median time from pediatric admission to surgical referral was 2 days (9 days), and the median time from surgical referral to thoracotomy was also 2 days (9 days). A total of 95% of cases (19 patients) had stage III empyema. The median time for open thoracotomy was 2 hours (1 hour). After surgery, half of the cases (10 patients) were extubated in operation theatre before transfer to ICU. The median time for length of stay after thoracotomy was 6.5 days (8 days), and for drain removal was 4 days (3 days). One child with background of cerebral palsy passed away 18 days after surgery due to septic shock. At follow-up, the thoracotomy wound had healed well. Serial chest radiographs showed expanded lungs.

CONCLUSION

A conventional open thoracotomy remains an excellent option with low morbidity and fast recovery for advanced empyema thoracis in the paediatric population when there is timely referral. Open thoracotomy is required in advanced stage of empyema for adequate visualisation ensuring complete lung expansion after surgery. The mortality that occurred in one case in this series could be attributed to the natural history of the patient's background illness which impaired the immune defense mechanism. Other treatment modalities (fibrinolysis and thoracoscopy) can be considered for empyema stages I-II.

PLEURAL EMPYEMA IN PAEDIATRIC PATIENTS IN HOSPITAL SERDANG, MALAYSIA

Faiza Syuhada M D, Dg Zuraini Sahadan
Paediatric Respiratory Unit, Hospital Serdang, Selangor, Malaysia

Introduction

Pleural empyema is a complication of pneumonia which still presents therapeutic challenges to clinicians.

OBJECTIVE

To determine the clinical characteristics, investigations and therapeutic options for children with pleural empyema.

METHODOLOGY

A retrospective case series was conducted in 10 children with pleural empyema admitted to Hospital Serdang over 15 months (January 2012 to March 2013).

RESULTS

Six boys and four girls were included, with a mean age of 4 years old (range 1 to 11.7 years old). They commonly presented with fever, cough and dyspnoea, while common signs were fever above 380C, intercostal recession, reduced breath sounds and dullness to percussion. Chest x-ray changes demonstrated unilateral moderate to large effusion. Ultrasound thorax was done in two patients pre-thoracocentesis to confirm diagnosis and in another four patients to monitor progression. Pleural fluid cultures were positive for Streptococcus pneumoniae in 4 (40%), Serratia marcerans in 1 (10%), and negative in 5 (50%). Urine for streptococcal antigen was positive in 6 patients (60%). Seventy per cent of children had a blood leucocytosis above 15 000cells/mm3 but blood culture was positive in only 1 patient. Most cases were treated with antibiotics and chest tube drainage. Only 1 patient required surgical intervention. Duration of hospital stay averaged 28.8 days (12-55 days). The mortality rate at the time of discharge was zero, with 100% radiographic resolution for 9 cases on follow up.

CONCLUSION

Streptococcus pneumoniae was found to be the leading cause of pleural empyema in this case series. Pleural drainage and antibiotics were safe and effective therapeutic options.

BRONCHIOLITIS OBLITERANS IN CHILDREN

Phang Yuk Jean, Asiah Kassim, Norzila Mohamed Zainudin
Institut Pediatrik, Hospital Kuala Lumpur, Kuala Lumpur, Malaysia

INTRODUCTION

Bronchiolitis obliterans (B0) is a form of chronic obstructive airway disease in children following an insult to the respiratory system.

METHOD

This is a retrospective analysis of data of newly diagnosed BO in Institut Pediatrik, Hospital Kuala Lumpur from 2009 till 2012. Analysis was done on demographics, clinical presentation, radiological findings, management and outcome.

RESULTS

There were 36 cases referred as suspected BO and 20 of them were confirmed. 19 cases were analysed. Mean age was 15.86+11.03 months. Thirteen of them were boys and 17 were Malays. Causes of bronchiolitis obliterans were infection related (17) and recurrent aspiration (2). Pathogens isolated were Adenovirus (5), Respiratory Syncytial Virus (1), ParaInfluenza Virus (1), Mycoplasma (2), Streptococcus pneumoniae (2), Pseudomonas aeroginosa (4) and Bordetella Pertussis (1). Four patients had underlying immunodeficiency and 3 patients had underlying medical problems. Four common symptoms were cough (16), shortness of breath(18), wheezing(11) and fever(8). Common clinical signs were tachypnoea (19), intercostal recession (19), crepitations (15), rhonchi (16), tachycardia (14), nasal flaring (3) and hyperinflated chest (18). Chest radiographs at diagnosis showed hyperinflation (15), consolidation (13) and peribronchial wall thickening (6). HRCT Thorax at diagnosis showed mosaic pattern, bronchial dilatation and vascular attenuation in 19 cases and 10 patients had additional consolidation changes. Eleven of them received ventilatory support and 18 of them required oxygen therapy during the initial illness. Upon diagnosis, all of them were given inhaled corticosteroids and 14 patients received a course of systemic steroids for 2-6 weeks. All patients required bronchodilators and 9 required it at frequent intervals. Eighteen patients survived and 13 were dependent on either oxygen, ventilator or both.

CONCLUSION

Infection is the commonest cause of BO and the majority require a form of long term respiratory support.

ADENOVIRUS INFECTION IN CHILDREN

Jasminder Kaur, Wong Hoi Ling, H Nazatul, A R Noor Zehan, Asiah Kassim, Norzila Mohamed Zainudin, Hussain Imam Hj Muhammad Ismail

Institut Pediatrik, Hospital Kuala Lumpur, Kuala Lumpur, Malaysia

INTRODUCTION

Adenovirus infection in children is commonly associated with respiratory morbidity. Recently, there was a surge of infection seen in our centre.

METHOD

A retrospective study was done on confirmed Adenovirus infection cases seen in Institut Pediatrik, Hospital Kuala Lumpur from March till April 2013. Analysis was done on demographic data, clinical presentation, radiological findings, management and outcome.

RESULTS

There were 18 cases confirmed to have Adenovirus infection during this period of time. Mean age was 19.5 months (4-66). Seventeen of them were Malays and 11 of them were boys. Mean duration of symptoms prior to diagnosis was 11.6 days (2-22). Three had history of asthma or atopy and incomplete immunisation. Common symptoms were cough (17), fever (18) and shortness of breath (10). Common clinical findings were hyperinflated chest (12), intercostal recession (16), crepitations (17) and rhonchi (10). Mean heart rate, respiratory rate and oxygen saturation on room air was 133 (93-170), 45.1 (30-70) and 97.9 (94-100) respectively. Twelve had single Adenovirus infection and another 5 had co-infections like Coronavirus, Parainfluenza virus, Boca Virus and Mycoplasma pneumoniae. First chest radiograph findings included hyperinflation (11), consolidation 93), peribronchial thickening (10), lung collapse (1) and pleural effusion (2). HRCT thorax were done on 4 patients which showed bronchiolitis obliterans (3) and bronchiectasis(1). Fourteen patients required respiratory therapy such as oxygen and ventilatory support. Other treatments include intravenous immunoglobulin (4), systemic steroids (9), inhaled steroids (9) and frequent bronchodilators (9). All patients survived but 5 of them required long term oxygen therapy and another 3 patients are still in the hospital.

CONCLUSION

Adenovirus infection is seen mostly in young children with cough, fever and shortness of breath as the presentation. It causes significant acute and long term morbidities.

CROSS CULTURAL TRANSLATION, ADAPTATION AND VALIDATION/ OF THE MALAY LANGUAGE VERSION OF THE PARENT PROXY COUGH QUESTIONNAIRE: A QUALITY OF LIFE COUGH QUESTIONNAIRE

A Wahiba[1], A M Nathan[2], J de Bruyne[2], R Zaki[3], A Muthusamy[2]

[1]Clinical Nurse Specialist, University Malaya Medical Centre, Kuala Lumpur, Malaysia
[2]Department of Paediatrics, University Malaya Medical Centre, Kuala Lumpur, Malaysia
[3]Julius Centre, Department of Social and Preventive Medicine, Universiti Malaya, Kuala Lumpur, Malaysia

INTRODUCTION

Cough is a common complaint amongst children and persistent cough can cause significant morbidity with disturbance of sleep and other activities of daily living. Presently the Paediatric Cough-Specific Quality of life (PC-QOL) questionnaire is the only one of its kind that has been validated in English, to be used in children with cough other than asthma.1 Hence our aim was to translate and validate this questionnaire for use in Bahasa Malaysia.

METHOD

The English version of the PC-QOL underwent 2 forward and 2 back translations by a local linguistic expert and three other native target language speakers, bilingual in both the English and Bahasa Malaysia language. Once harmonisation of the final version was done, it was administered to parents of children with chronic cough. Children with a diagnosis of asthma (except cough variant asthma) and parents who were unable to read Malay were excluded. Test-retest reliability was done 2 weeks later via post or email.

RESULTS

There were 45 respondents and 30 parents completed the test-retest reliability. The internal consistency for the translated questionnaire was high (Cronbach's $\alpha = 0.95$). Test-retest analysis revealed 8 questions with a low score (<0.4). The prolonged interval between the test-retest (median 21[IQR 15-30] days) could have affected the reliability of the translated questionnaire.

CONCLUSION

The Cronbach's alpha for the translated questionnaire was high. Due to a number of questions with low test-retest reliability, these may need to be reviewed and re-translated to ensure good reliability of the questionnaire.

REFERENCES

1. P. Newcombe 2010. Validation of the parent-proxy quality of life questionnaire for paediatric chronic cough (PC-QOL)

PREVALENCE AND RISK FACTORS OF DRUG RESISTANT PULMONARY TUBERCULOSIS IN HOSPITAL TENGKU AMPUAN AFZAN AND HOSPITAL SELAYANG

Natasha Housseine[1], Soon Hin How[1], Tengku Saifudin Tengku Ismail[2], Yeh Chunn Kuan[1], Mohammed Fauzi Abdul Rani[1], Jamalludin Ab Rahman[1], Mohd Arif Mohd Zim[2], Sarah Ileen Liew[1]

[1]International Islamic University Malaysia, Kuantan, Pahang, Malaysia
[2]Universiti Teknologi MARA, Selangor, Malaysia

BACKGROUND & OBJECTIVE

Emergence of drug resistant tuberculosis (TB) i.e. multidrug resistance (MDR) or mono-resistance (MR), affects clinical management of patients with pulmonary tuberculosis (PTB). This study aimed to determine the prevalence of MDR and MR in two major hospitals in Malaysia and identify risk factors or co-morbidities associated with MDR and MR-TB.

METHODOLOGY

A retrospective review of adult patients treated for PTB in Hospital Selayang and Hospital Tengku Ampuan Afzan (HTAA) was performed from 1st January 2008 to 31st December 2010. Patients' information was obtained from TBIS forms and hospital admission files. Statistical software used was PASW 18.0.

RESULTS

A total of 281 PTB cases were tested for drug susceptibility. Overall, 261 cases (92.9%) were fully sensitive to first line anti-TB drugs, 15 cases (5.3%) were MR-TB whilst 5 cases (1.8%) were MDR-TB. HTAA had higher prevalence of drug resistant PTB (11.1% MR and 2.8% MDR) as compared to Hospital Selayang (1.7% MR and 1.2% MDR, $p < 0.001$). Previous history of PTB was significantly associated with an increased frequency of drug resistance. Other factors such as history of intravenous drug abuse, age, gender and concurrent co-morbidities such as diabetes and HIV/AIDS showed no increase in the likelihood of drug resistance.

CONCLUSION

A previous history of PTB conferred a higher risk for developing resistance to anti-TB drugs. Clinicians are recommended to send sputum for mycobacterial culture and drug sensitivity testing for all PTB patients especially patients with previous PTB.

PULMONARY TUBERCULOSIS: CO-MORBIDITIES, DRUG SUSCEPTIBILITY AND ITS ASSOCIATION WITH CLINICAL OUTCOMES

Sarah Ileen Liew[1], Soon Hin How[1], Tengku Saifudin Tengku Ismail[2], Yeh Chunn Kuan[1], Mohammed Fauzi Abdul Rani[1], Jamalludin Ab Rahman[1], Mohd Arif Mohd Zim[2], Natasha Housseine[1]

[1]International Islamic University Malaysia, Kuantan, Pahang, Malaysia
[2]Universiti Teknologi MARA, Selangor, Malaysia

BACKGROUND & OBJECTIVE

Various factors have been shown to influence the clinical outcomes of pulmonary tuberculosis (PTB) patients. The aims of this study were to identify PTB patient co-morbidities and anti-TB drug sensitivity and their association with clinical outcomes.

METHODOLOGY

A retrospective case-control study was performed of adult patients treated for PTB in Hospital Selayang and Hospital Tengku Ampuan Afzan (HTAA) from 1st January 2008 to 31st December 2010. Patients' information was obtained from TBIS forms and hospital admission files. Clinical outcomes were divided into unfavourable outcomes which were relapse, treatment failure or death and favourable outcome, that is, cure. Statistical software used was PASW 18.0. Statistical tests done were Chi-square test, Fisher's exact test and multiple logistic regression. A p-value of < 0.05 was considered to be statistically significant.

RESULTS

A total of 817 pulmonary TB patients (PTB) were identified in both hospitals. The majority of PTB patients were male (68.8%) and below 60 years of age (84.3%). There was a high prevalence of concurrent co-morbidities including diabetes (26.2%), HIV/AIDS (14.7%), hypertension (13.8%) and Hepatitis C (13.3%) among PTB patients. Mortality was high in PTB patients (14.6%). Significant factors associated with unfavourable outcomes included Indian ethnicity (p=0.024), being unemployed (p=0.011), history of smoking (p=0.013), previous history of tuberculosis (p=0.008) and presence of concurrent co-morbidities such as diabetes (p=0.008), hypertension (p=0.001), history of stroke (p=0.001) and chronic kidney disease (p=0.003). HIV-status (p=0.093), intravenous drug use (p=0.085) and drug sensitivity (p=0.282) were not significantly associated with clinical outcomes. Multiple logistic regressions showed that older patients, being unemployed and history of smoking were associated with unfavourable outcomes.

CONCLUSION

Concurrent co-morbidities are better predictor of clinical outcome compared to anti-TB drug sensitivities in PTB patients.

POTENTIAL RISK FACTORS ASSOCIATED WITH MULTIDRUG-RESISTANT TUBERCULOSIS IN MALAYSIA: A RETROSPECTIVE STUDY

S E Omar[1], H Habsah[2], Sarimah A[1], M J Mat Zuki[3], N Wan-Arfah[1], B A Zilfalil[4], N N Naing[1]

[1]Unit of Biostatistics and Research Methodology, School of Medical Science, Universiti Sains Malaysia, Kelantan, Malaysia
[2]Department of Medical Microbiology and Parasitology, School of Medical Science, Universiti Sains Malaysia, Kelantan, Malaysia
[3]Respiratory Unit, Department of Medicine, Hospital Raja Perempuan Zainab II, Kota Bharu, Kelantan, Malaysia
[4]Department of Paediatrics, School of Medical Science, Universiti Sains Malaysia, Kelantan, Malaysia

BACKGROUND

Multi-drug resistant Tuberculosis (MDR-TB) has emerged as a major threat to public health worldwide. Risk factors associated with MDR-TB are not well described in Malaysia. Therefore the aim of this study was to determine the risk factors associated with the development of MDR-TB.

METHODS

A retrospective record review study was conducted among MDR-TB patients from January 2010 until October 2012. The study recruitment involved all MDR-TB patients who presented as outpatients at several respiratory specialist clinics or were admitted to hospitals in west Malaysia. Patients included were those with confirmed tuberculosis with culture proven Mycobacterium tuberculosis (MTB) resistant to at least isoniazid and rifampicin. Data was collected by using a newly structured questionnaire that included socio-demographic characteristics, past medical history, behavioral risk factors, and clinical characteristics. Data was analysed using multiple logistic regressions.

RESULTS

A total of 77 MDR-TB patients were enrolled in the study including 25 females out of which 16 (41.1%) had primary MDR-TB and 9 (24.3%) had secondary MDR-TB with age range of 37 to 44 years old. Of the 52 male patients, 24 (60.0%) had primary MDR-TB and 28 (75.7%) had secondary MDR-TB. The significant risk factors for the development of secondary MDR-TB were immigrant [adjusted odds ratio, [AOR (95%CI): 7.27(1.77, 29.76)], those with history of intravenous or subcutaneous drug use [AOR (95%CI): 21.34(2.28, 199.71)] and history of defaulting TB treatment [AOR (95%CI): 10.42(2.68, 40.38)].

CONCLUSION

Immigrants, defaultation of TB treatment and history of drug abuse were significant risk factors associated with development of secondary MDR-TB. Strengthening compliance to TB treatment and infection control measures are very crucial for preventing MDR transmission.

KEYWORDS

Tuberculosis, Multidrug-resistant, Isoniazid, Rifampicin, Malaysia

AN AUDIT ON TUBERCULOSIS DEATHS IN KEDAH

Asyif Fairus[1], Bassir Abd Hamid[2], Razul Kassim[1], Mustafa Kamal[1]

[1]Jabatan Respiratori, Hospital Sultanah Bahiyah, Alor Setar, Kedah, Malaysia

[2]Jabatan Kesihatan Negeri Kedah, Simpang Kuala, Alor Setar, Kedah, Malaysia

An audit of tuberculosis (TB) death was done retrospectively from records traced from the chest clinics and health clinics in Kedah for 2011 and 2012 in order to understand the pattern of TB death in Kedah state. There were 77 cases of TB death in 2011 compared to 50 cases in 2012. The Kota Setar district contributed the most cases of TB death in both years; 35 cases (46.0%) and 15 cases (30.0%) respectively. Most of the TB deaths occurred in the age group 70-79 years old for 2011 (22.0%) but there was an equal proportion from the age groups 70-79 years and 60-69 years for 2012 (23.0% respectively). Males accounted for most of the TB deaths for both years (78.0% and 76.0% respectively). Most of the TB deaths occurred while the patients were still in the intensive phase of the TB treatment (81.0% of deaths in 2011 and 78.0% in 2012). There were 10 patients (13.0%) who were confirmed to be HIV positive at the beginning of TB treatment for the 2011 deaths compared to 7 cases (14.0%) for those that died in 2012. Among the HIV positive TB patients who died, cerebral toxoplasmosis was found to be the main primary cause of death in 2011 (50.0%) while septicaemia with AIDS was the commonest primary causes of death in 2012 (86.0%). On the other hand, the main primary cause of death in TB cases among non-HIV positive patients was advanced pulmonary TB (31.0%) in 2011 and septicaemia (37.0%) in 2012. However, it was found that in the majority of deaths among TB patients, the primary cause of death was not related to active TB disease. About 69.0% and 74.0% of cases that were documented as TB death were not due to active TB in the two years studied. This audit encountered problems with inaccuracy of TB death diagnosis and incomplete TB death notification. Therefore, the medical officer in-charge should be responsible for performing proper TB death documentation. A revision of TB death documentation should also be made for TB cases that died at home.

REFERENCES:

1. WHO global TB report 2012. 2. Hooi LN, Goh KY. A hospital based audit of tuberculosis deaths. Med J Malaysia.1995 Dec; 50(4).

TUBERCULOSIS OF SPINE: A RETROSPECTIVE STUDY IN HOSPITAL SULTANAH BAHIYAH

Maimunah J, Razul Kassim, Mustafa Kamal
Jabatan Respiratori, Hospital Sultanah Bahiyah, Alor Setar, Kedah, Malaysia

BACKGROUND
Delay in diagnosis of tuberculosis (TB) of spine has led to increased morbidity and mortality in patients.

OBJECTIVE
This study is aimed to understand current status of tuberculosis spine in Kedah.

METHODS
32 patients treated as TB spine as inpatients and outpatients in Hospital Sultanah Bahiyah II, Alor Setar, Kedah from January 2008 until January 2010 with no history of previous tuberculosis were studied.

RESULT
Male to female ratio was 19:14. Age range was 4 – 77 years with mean age of 47 years. 28 patients (87.5%) presented with back pain, 16 (48.3%) presented with weakness, 5 (15.2%) presented with limb numbness and 3 (9.7%) presented with incontinence. 16 patients presented with more than one symptom, back pain and incontinence 1 (6.2%), back pain and weakness 11 (68.7%), back pain and numbness 1 (6.2%), back pain, weakness and numbness 1 (6.2%), back pain, weakness and incontinence 1 (6.2%), back pain, weakness, numbness and incontinence 1 (6.2%). Duration of symptoms before presentation to a health care facility was < 1 month in 7 (24.1%), 1 – 6 months in 6 (20.6%), 6 - 12 months in 5 (17.2) and > 1 year in 11 (37.9%). 27 patients (87.1%) were treated with chemotherapy alone while 4 patients (12.9%) were treated with a combination of chemotherapy and surgical treatment. The lumbar vertebrae were most frequently involved in 15 patients (60%), followed by the thoracic vertebrae in 12 patients (48%), cervical vertebrae in 6 (24%) and sacrum in 3 (12%). 1 patient (3.2%) had concomitant pulmonary tuberculosis. Favourable outcome was seen more often in patients undergoing treatment for 12 months compared to those who underwent treatment for 6 months or less with p value of 0.006.

CONCLUSION
Tuberculosis of the spine is an important cause of morbidity and mortality and early diagnosis and initiation of treatment can improve the outcome of patients.

REFERENCES
1. Tuli SM. 3rd ed. New Delhi: Jaypee Brothers; 2004.
2. Farer LS, Lowell AM, Meador MP. Extrapulmonary tuberculosis in the United States. Am J Epidemiol. 1979; 109: 205–17.

ADVERSE REACTIONS TO ANTI-TUBERCULOSIS THERAPY IN A SINGLE CENTRE

Kasuma M N, A R Mutalif, Devi
Institut Perubatan Respiratori, Kuala Lumpur, Malaysia

INTRODUCTION
Tuberculosis (TB) is one of the major diseases that reflects the health and social status of a country. To treat tuberculosis is a management challenge since anti-tuberculosis medication may produce side-effects that vary from being unimportant to life threatening.

OBJECTIVES
To assess the rate of Adverse Drug Reactions (ADRs) induced by Anti-TB drugs in Institut Perubatan Respiratori (IPR) for a period of one year and to determine factors associated with anti-tuberculosis adverse drug reactions.

METHODOLOGY
Retrospective observational study of patients in IPR who were diagnosed as suffering from pulmonary tuberculosis from 1 Jan 2012 to 31 Dec 2012. Patients were identified from pharmacist records of adverse drug reaction for the year 2012 and data collection was done from patients' medical records.

RESULTS
During the study period, 1520 patients received anti-TB drugs, out of which 21 developed at least one ADR (71.5%). Majority of them are Malaysian (95.2%) and newly diagnosed with tuberculosis (81%). Males more commonly develop ADR (71.4%). The commonest side-effect was rash (71.4%) followed by hematological abnormality (19%), hepatitis (14%) and acute kidney injury (9%). Most of them were treated successfully after drug challenge with anti-TB medication, except for one patient who died because of septicaemia.

CONCLUSIONS
Anti-TB drugs can cause significant adverse effects both in quantity and severity. These reactions may lead to hospitalisation, prolonged hospital stay and even death.

A YEAR REVIEW OF NOSOCOMIAL TUBERCULOSIS INFECTION IN HEALTH CARE WORKERS: IPR EXPERIENCE

Z Abu Bakar, R Yassin, N Mazuki, A R Mutallif
Institute of Respiratory Medicine, Kuala Lumpur, Malaysia

INTRODUCTION

Occupational exposure to Mycobacterium tuberculosis constitutes a potential health hazard for health care workers (HCW) worldwide. Recent reports from developing countries have shown that HCW caring for patients with infectious tuberculosis (TB) are at high risk of acquiring M. tuberculosis infection and disease. In Malaysia, the incidence of tuberculosis infections is increasing and this is reflected in the incidence of nosocomial tuberculosis among HCW. Over the years from 2006 to 2010, the number of HCW infected rose from 112 to 220. Looking only at Wilayah Perseketuan territory, the numbers had increased from 4 cases in 2007 to 38 cases in 2012.

METHOD

This is a retrospective study, looking at the health care worker infected with M. Tuberculosis in year 2012. There were 28 cases under Institute of Respiratory Medicine (IPR) follow up, out of total 38 cases in Wilayah Perseketuan.

RESULTS

From this study, three quarters of the survey cohort were female. This is in contradistinction to the rate for the general population where more male patients suffer from tuberculosis. However, the age distribution was comparable to that for the general population. Looking at job categories, most of the cases occurred in nurses, followed by general health assistants and doctors. Overall, all categories were involved. Nevertheless, Medical department contributed the highest number of cases.

CONCLUSION

The rising number of cases of M. Tuberculosis in health care workers is worrying and overwhelming. Action should be taken to reduce nosocomial transmission. Changes have to be made to protect the health care staff. TB infection control measures and regular staff screening must be emphasised.

SMEAR NEGATIVE PULMONARY TUBERCULOSIS: CLINICAL FEATURES AND OUTCOME

R A Rahman
Institute Respiratory Medicine, Kuala Lumpur, Malaysia

INTRODUCTION

Smear negative pulmonary tuberculosis is not uncommon and the objective of this study is to describe the proportion of patient with smear negative pulmonary tuberculosis who were sputum culture positive.

METHOD

This is a retrospective study where case records for smear negative pulmonary tuberculosis from January 2012 until June 2012 in Institute of Respiratory Medicine were reviewed. We compared smear negative culture positive pulmonary tuberculosis and smear negative culture negative pulmonary tuberculosis cases and described their characteristics.

RESULT

A total of 124 case records were reviewed. Of these, 54 patients (43.5%) were sputum culture positive and 51 (41.1%) were culture negative. 8 patients (6.5%) grew atypical mycobacterium and 11 (8.9%) patients had no record of sputum culture. Among the culture positive group, Malays constituted the largest number accounting for 28 patients (51.9%). The mean age for culture positive cases was 38.24 and mean age for culture negative patients was 35.59. Patients who were culture positive were more likely to have prolonged cough ($p = 0.015$) and history of tuberculosis contact ($p = 0.01$). 4 patients in the culture negative group developed side effects to anti-tuberculosis treatment.

CONCLUSION

This retrospective study showed that sputum culture is an important test and t patients with prolonged cough with history of tuberculosis contact are more likely to be sputum culture positive.

REFERENCES

Range Nyagosya et al. Risk factors for smear negative and culture positive results among pulmonary tuberculosis patients in Mwanza, Tanzania. The Open Tropical Medicine Journal, 2008, vol 1.

1. Roya Alavi-Naini MD et al. Clinical and laboratory diagnosis of the patients with sputum smear negative pulmonary tuberculosis. Arch Iran Med:2012;15(1):22-26.

CLINICAL PARAMETERS AND INVESTIGATIONS IN DIAGNOSING TUBERCULOUS PLEURAL EFFUSION IN HOSPITAL SELAYANG FROM 2010-2012

S S Sirol Aflah[1], A N Musa[2], N A Mohd Yunus[1], S Ab Wahab[2], T S Ismail[2]
[1]Hospital Selayang, Selangor, Malaysia
[2]Universiti Teknologi MARA, Selangor, Malaysia

INTRODUCTION
Pleural tuberculosis (TB) is a common form of an extra-pulmonary tuberculous disease. Pleural involvement may be primary or secondary to pulmonary tuberculosis (PTB) or TB reactivation. The diagnosis is often a challenge to medical practitioners.

OBJECTIVE
To evaluate clinical parameters and investigations used in diagnosing pleural tuberculosis.

METHOD
This is a cross sectional analysis of patients diagnosed as tuberculous pleural effusion from year 2010 – 2012 in Hospital Selayang.

RESULTS
A total of 40 patients (2 patients were health care workers) were analysed. Mean age was 46.53 (±15.05) years. Majority were in the age group of 35-44 years (22.5%). 77.5% were male. 9 0% were Malaysians.

Their symptoms upon presentation were cough (67.5%), fever (50%), loss of appetite (40%), loss of weight (35%) and shortness of breath (35%). The risk factors were chronic kidney disease (27.5%), previous exposure to PTB (20%), diabetes (15%), immunosuppression (10%) and previous PTB (5%).

Chest x-ray findings were one sided pleural effusion (75%), pleural effusion with lung parenchyma changes (15%) and bilateral pleural effusion (10%). 85% of patients had pleural fluid sent for biochemical analysis. 76.4% were found to have transudative effusion. 32.5% had bronchoscopy, out of which 76.9% had normal findings. 20% had pleuroscopy which mostly showed adhesions (75%). 15% had positive smear for acid fast bacilli (from sputum or pleural fluid). 22.5% had positive TB culture. 50% had pleural biopsy done. Histological examination of pleural biopsies revealed granulomatous inflammation (20%), caseating tuberculosis (15%) and necrotising granuloma (15%).

CONCLUSION
We concluded that symptoms, pleural fluid analysis, pleuroscopy and biopsy are the important tools to diagnose pleural tuberculosis.

TUBERCULOSIS INFECTION IN PATIENTS WITH SYSTEMIC LUPUS ERYTHEMATOSUS IN MALAYSIA

H Baharuddin[1], M A Mohd Zim[1], A Rosman[2], T S T Ismail[1]
[1]Universiti Teknologi MARA, Faculty of Medicine, Selangor, Malaysia
[2]Hospital Selayang, Selangor, Malaysia

BACKGROUND
Systemic Lupus Erythematosus (SLE) is a debilitating chronic disease and its treatment consists of various immunosuppressive drugs, resulting in increased incidence of infections including tuberculosis (TB).

OBJECTIVE
To investigate the characteristics of TB in patients with SLE

METHODS
The clinical records of patients notified for TB in Selayang Hospital, from 2007-2011, were reviewed. We included patients who develop TB after SLE diagnosis was established.

RESULTS
Thirteen out of the 14 patients studied (92.9%) were female. The mean age was 32.07 (± 8.28years). The mean duration of SLE diagnosis before the occurrence of TB was 59.93 (± 54.70) months. Six patients (42.9%) had received cyclophosphamide in the past. There were 9 patients (64.3%) with extrapulmonary site of TB infection. Sputum smear for acid fast bacilli (AFB) were positive in 6 patients (42.9%) while TB cultures were positive in 7 patients (50%). Out of the 14 patients,7 (50%) were still alive, 5 patients(35.7%) had died, while 2 patients (14.3%) had been lost to follow up.

CONCLUSIONS
In our SLE patients with TB, we observed:

1. Extrapulmonary site of TB infection occurred more frequently compared to pulmonary.
2. More positive Mycobacterium tuberculosis cultures than positive AFB smear - thus cultures played an important role in making the diagnosis of TB.
3. High mortality rate of SLE patients with TB.

CLINICAL PARAMETERS IN DIAGNOSING SMEAR NEGATIVE PULMONARY TUBERCULOSIS – A CROSS SECTIONAL ANALYSIS OF CASES IN HOSPITAL SELAYANG FROM 2010 – 2012

S S Sirol Aflah[1], A N Musa[2], N A Mohd Yunus[1], S Ab Wahab[2], T S Ismail[2]
[1]Hospital Selayang, Selangor, Malaysia
[2]Universiti Institut Teknologi MARA, Selangor, Malaysia

INTRODUCTION
The prevalence of smear negative pulmonary tuberculosis (PTB) is increasing in Malaysia. However, the diagnosis often poses a great challenge to medical practitioners.

OBJECTIVE
To evaluate the clinical parameters used for the diagnosis of smear negative PTB.

METHOD
This is a cross sectional analysis of patients diagnosed with smear negative PTB during the years 2010 – 2012 in Hospital Selayang.

RESULTS
A total of 195 patients were notified as smear negative PTB. We excluded 67 patients who were wrongly notified, 32 patients who died before completion of treatment, 6 patients with HIV infection and 21 patients who defaulted treatment. Data from the remaining 69 patients were analysed.

The mean age was 44.71 (±18.52) years. Majority were male patients (56.9%), in the age group of 25-34 years (22.4%) and Malay (50%). 98.3% were active cases while 1.7% had incidental chest x-ray findings. The presenting symptoms were prolonged cough (77.6%), fever (55.2%), loss of weight (46.6%) and loss of appetite (43.1%). The associated risk factors were tuberculosis (TB) exposure (24.1%), diabetes (19%), chronic kidney disease (5.2%), immunosuppression (10.3%) and previous TB (3.4%). 67.2% patients had suggestive radiological findings showing evidence of consolidation or cavities.

CONCLUSION
We conclude that symptoms especially prolonged cough, risk factors especially previous TB exposure and suggestive radiological evidence are the most useful parameters for diagnosis of smear negative PTB. A guideline for diagnosis of smear negative tuberculosis should be established in order to prevent misdiagnosis or overzealous treatment in managing patients.

A REVIEW OF ADULT NON-HIV TUBERCULOUS MENINGITIS

R A Rahman, A A Mahayiddin, M Vergis, N K Fong
Institute of Respiratory Medicine, Kuala Lumpur, Malaysia

INTRODUCTION
Tuberculous meningitis is a very critical disease with high mortality and permanent sequelae, therefore requires rapid diagnosis and treatment. The diagnosis of tuberculous meningitis is based on detection of acid fast bacilli in cerebrospinal fluid but many patients are being treated on the basis of clinical suspicion.

OBJECTIVE
This study aimed to evaluate the history, clinical and laboratory findings of patients with tuberculous meningitis.

METHOD
This is a retrospective study done on patients with tuberculous meningitis admitted to Institute of Respiratory Medicine from January 2011 until May 2013.

RESULTS
Ten patients were admitted with tuberculous meningitis. 50% of the patients were immigrants, 20% had underlying diabetes mellitus with 30% of patients had previous history of tuberculosis. Median age was 29 years and median symptom duration before admission was 21 days. Half of the patients presented with convulsion and neurological signs were described in all patients. All the patients tested negative for HIV. 80% of patients had lumbar puncture done and biochemical analysis of cerebrospinal fluid samples revealed pleocytosis in 63%. Protein levels in cerebrospinal fluid were elevated in 75% of patients. All the cerebrospinal fluid cultures for M. tuberculosis were negative. Only 40% of patients had M. tuberculosis DNA detected by PCR test. All the patients had neuro-radiological imaging and the most common findings on neuro-radiological imaging were meningeal enhancement (60%), hydrocephalus (40%) and tuberculoma (40%) with most patients had combination findings on neuro-radiological imaging.

CONCLUSION
Tuberculous meningitis is a serious illness and the diagnosis of tuberculous meningitis remains difficult, therefore clinicians must have high index of suspicion for the diagnosis of tuberculous meningitis.

CHARACTERISTICS AND OUTCOME OF PULMONARY TUBERCULOSIS IN PATIENTS WITH DIABETES MELLITUS

Zamzurina A B, Rashidah Y, A Razak A M
Institut Perubatan Respiratori, Kuala Lumpur, Malaysia

INTRODUCTION

Diabetes Mellitus (DM) is a known risk factor for pulmonary tuberculosis (PTB). With the increasing prevalence of type 2 DM in our country, many patients with PTB will have concomitant DM.

METHODOLOGY

A retrospective study analyzing all new patients with smear positive PTB diagnosed in Institute of Respiratory Medicine, between October to December 2011. Analysis was done based on the patients' notes.

OBJECTIVE

To determine the clinical characteristics, radiological finding and outcome of PTB patient with and without DM.

RESULT

There were total of 258 patients with PTB smear positive analysed. DM was diagnosed in 45 (17.4%) of patients. The mean age in DM and non-DM was 48.8 and 35.7 ($p<0.05$) respectively. On presentation, diabetic patients had similar symptoms as non-diabetic patients ($p>0.05$). After 2 months, 34 (76%) of cultured sputum from DM group was positive for Mycobacterium tuberculosis ($p=0.16$). One of the cultures was resistant to isoniazid and one resistant to streptomycin and isoniazid, the remaining were sensitive to first line anti-tuberculosis. On CXR, DM group had more severe atypical presentations compared to the non-DM grouped; 47.7% vs. 26.2% respectively ($p<0.05$)). Cavitary lesions were found more frequently in the DM group (70.5% vs. 53.5%, $p<0.05$). The duration of treatment was 6 months. The cure rate was similar for the two groups.

CONCLUSION

In this study, Diabetes Mellitus do not have much influence on clinical symptoms and bacteriological findings of TB patients. However, significant difference was found between the 2 groups in terms of radiological presentation. The DM group had atypical location and more severe cavitary lesions compared to non-DM group. In terms of outcome, DM had no impact on PTB outcome.

A CASE SERIES OF ENDOBRONCHIAL HAMARTOMA

Mona Nasaruddin[1], Azlina Samsudin[2], Dora Amran[1], Ngan K W[2], Sellymiah Adzman[2], Huzlinda Husin[3], Liza Fisal[3], Termizy H M[4], Nurhayati Marzuki[1], Jamalul Azizi[2], Ashari Yunus[1], Aziah A M[1], Abdul Razak A M[1]

[1]Institut Perubatan Respiratori, Kuala Lumpur, Malaysia
[2]Hospital Serdang, Selangor, Malaysia
[3]Universiti Putra Malaysia, Selangor, Malaysia
[4]Hospital Sultanah Nur Zahirah, Terengganu, Malaysia

INTRODUCTION

Endobronchial hamartoma is a rare, benign tumour of the endobronchial tree1. It accounts for approximately 3–20% of all pulmonary hamartomas2. It can cause irreversible pulmonary destruction due to endobronchial obstruction. Early diagnosis and treatment is very important and endoscopic treatment is usually the first choice.

PATIENTS AND METHOD

Four cases of endobronchial hamartoma were diagnosed from November 2011 until March 2013 and reviewed retrospectively.

RESULTS

There were three males and one female with mean age of 48 years (40-57 years old). All cases presented with obstructive pneumonia. Further imaging and bronchoscopy showed an endobronchial mass. However, there were difficulties in diagnosis of the disease by flexible bronchoscopy and the patients had to proceed to rigid bronchoscopy. All endobronchial hamartoma were removed by rigid bronchoscopy except for one case. The diagnosis was confirmed by histological examination.

CONCLUSION

Although endobronchial hamartoma is a benign tumour, early diagnosis and prompt treatment is crucial in order to prevent irreversible obstructive lung damage and preserve distal lung function.

COEXISTING LUNG CANCER IN SMEAR POSITIVE PULMONARY TUBERCULOSIS PATIENTS

A Musa[1], S Ab Wahab[2], T Ismail[1], A Mohd Zim[1], S Othman[1], S Sirol Aflah[2], N Mohd Yunus[2]
[1]Universiti Teknologi MARA, Selangor, Malaysia
[2]Hospital Selayang, Selangor, Malaysia

INTRODUCTION

Pulmonary tuberculosis (PTB) is highly prevalent in Malaysia while lung cancer is the 3rd most common cancer and is the leading cause of cancer deaths1. As both share common symptoms, discriminating between the two may be difficult.

METHOD

This paper presents 3 cases of lung cancer coexisting in smear positive PTB patients.

RESULTS

Case 1: A 60 year old Chinese male presented with 2 weeks history of cough and fever. Chest x-ray (CXR) showed consolidation with cavitation in right upper and midzones. Sputum smear for acid fast bacilli smear (AFB) was positive and patient was treated for tuberculosis. There was no clinical or radiological improvement 4 months after treatment was started and he later presented with superior vena cava obstruction (SVCO). Bronchoscopy showed abnormal mucosa and nodule at right bronchus intermedius and right upper lobe which was proved to be lung adenocarcinoma.

Case 2: An 81 years old Indian male presented with 2 months history of deteriorating breathlessness and SVCO symptoms. His sputum AFB smear was positive but CT thorax was suggestive of bronchogenic carcinoma. Bronchoscopy revealed an endobronchial lesion with histology findings of small cell lung carcinoma.

Case 3: A 43 year old Indonesian female presented with symptomatic right pleural effusion. Sputum AFB smear was positive and she was treated accordingly. However her pleural fluid cytology came back as metastatic adenocarcinoma of lung origin.

CONCLUSION

Although PTB is highly prevalent, we should not be too acquiescent to the diagnosis of smear positive PTB as lung cancer can also coexist. Concurrent lung cancer in PTB patients should always be considered especially in patients who do not improve on anti-TB treatment.

REFERENCES

1. L Chong-Kin. Lung Cancer in Malaysia – Epidemiology and Management Practices http://www.mts.org.my/resources/Lung%20Cancer%20In%20Malaysia%20-%20epidemiology%20and%20management%20practices.pdf

PP42

CASE STUDIES: ENDOSCOPIC RESECTION OF PULMONARY CARCINOID, SERDANG EXPERIENCE

A Samsudin, L Ahmad Fisal, J A Abdul Rahaman, M Z Nasaruddin
Hospital Serdang, Selangor, Malaysia

BACKGROUND

Pulmonary carcinoid accounts for only 1 to 2% of all pulmonary tumours. Of all carcinoids, 25% are pulmonary carcinoids. Surgical resection is the standard treatment for carcinoid tumours. Most studies have found that patients with pulmonary carcinoid have good survival rates.

Case 1: A 29 year old lady presented with intermittent haemoptysis and wheezing during the second trimester of her first pregnancy over a period of 3 months. She was treated as pneumonia with hyperactive airway by a general practitioner. She was admitted to a CCU at 34 weeks POA for atrial tachycardia and noted to have right upper lobe collapse. Flexible bronchoscopy revealed a fleshy mass obstructing the right main bronchus and biopsy showed 'typical' pulmonary carcinoid tumour. She underwent rigid bronchoscopy post delivery for partial resection of the tumour. She is currently asymptomatic with resolved upper lobe collapse.

Case 2: A 38 year old man who had right middle and lower lobectomy done in 2005 for 'atypical' pulmonary carcinoid presented with worsening wheezing for 3 months. Flexible bronchoscopy revealed a floppy mass with a stalk in the left main bronchus. Rigid bronchoscopy was performed and the mass was resected with electricosurgical snare. Residual small nodules were treated with cryotherapy on second rigid bronchoscopy procedure and he remains asymptomatic. His gallium 68 PET CT scan showed no nodes highlighted or disease elsewhere.

CONCLUSION

Endoscopic removal of limited pulmonary carcinoid is an option for less invasive therapy with curative intent.

PP43

MALIGNANT TRACHEAL STENOSIS MISDIAGNOSED AS COPD

K H Lai[1], J L Wong[1], P J Voon[2], S T Tie[1]
[1]Respiratory Medicine Unit, Department of Medicine, Sarawak General Hospital, Kuching, Sarawak, Malaysia
[2]Department of Oncology and Radiotherapy, Sarawak General Hospital, Kuching, Sarawak, Malaysia

INTRODUCTION

Tracheal disease is uncommon and can mimic other obstructive lung diseases. We illustrate a case of tracheal stenosis caused by external compression by metastatic lymphadenopathy secondary to lung squamous cell carcinoma (SCC) and successful treatment with tracheal dilatation by rigid bronchoscope.

CASE PRESENTATION

A 76-year-old man, smoker of 80 pack years, presented with breathlessness, wheezing and hoarseness of voice and was treated as COPD for 5 months before presenting to us. Physical examination revealed dyspnoea with diffuse rhonchi in both lungs. CXR was unremarkable. He was again treated as acute exacerbation of COPD with no improvement. Direct flexible laryngoscopy was performed which revealed left sided vocal cord palsy. His CT thorax showed a large right paratracheal lymph node measuring 3 x 4cm compressing the trachea with the width measuring 3mm at its narrowest part. Another separate intraluminal lesion in the left lower lobe bronchus was seen likely representing the primary lung lesion. An urgent rigid bronchoscopy was performed and revealed a critical stenotic segment of 2-3 mm in transverse diameter at the distal trachea with mucosal tumor invasion. Dilatation of the stenotic segment was performed using rigid bronchial tube. Argon plasma coagulation was applied to coagulate the mucosal portion of the tumor. The final size of the trachea lumen was 13mm in transverse diameter and 25mm in anteroposterior diameter. Histopathological examination of the primary lesion biopsy showed SCC. A repeat bronchoscope showed that the trachea diameter remained the same with no tracheolmalacia. Post bronchoscopy spirometry showed no evidence of COPD.

DISCUSSION

This case underpins the importance of differential diagnosis in patients presenting with COPD-like symptoms especially in the presence of atypical symptom like hoarseness of voice. An initial spirometry, if performed, is likely able to differentiate between central airway obstruction from COPD. We recommend doing spirometry for all patients suspected of COPD.

PP44

UNCONTROLLED BRONCHIAL ASTHMA AS PRESENTATION OF ENDOBRONCHIAL HAMARTOMA

Rashidah Y, Dora A, Ashari Y
Institute of Respiratory Medicine, Kuala Lumpur, Malaysia

We report 2 cases of endobronchial hamartoma presenting with chronic uncontrolled asthma. In the first case, the patient was a 40 year old woman diagnosed with asthma since childhood. She has history of uncontrolled asthma for the last 3 years. She presented with obstructive pneumonia. Collapse consolidation was seen in the CXR and fibreoptic bronchoscopy examination revealed endobronchial mass in the right upper lobe. In the second case, the patient was diagnosed as asthma at the age of 74 years old. He was a non-smoker and had history of frequent exacerbations in the last 3 years. Initially, he was admitted for acute exacerbation of asthma precipitated by pneumonia. However, after a week in the ward, he developed a new spike of fever associated with obstructive pneumonia and repeat CXR showed collapse consolidation of the left lung. Fibreoptic bronchoscopy examination revealed an endobronchial mass which was totally obstructing the left main bronchus. In both cases, diagnostic and curative rigid bronchoscopy was performed and histopathological examination confirmed the lesions as hamartoma.

DISCUSSION

Delay in diagnosis was observed in these patients as they were diagnosed to have uncontrolled bronchial asthma for a few years prior to establishing the diagnosis of endobronchial hamartoma. After curative rigid bronchoscopy, treatment for bronchial asthma could be stepped down and the disease was well controlled. We suggest fibreoptic bronchoscopy examination as one of the investigations for uncontrolled asthma and rigid bronchoscopy as diagnostic and curative modality for endobronchial hamartoma, sparing the patient the need to undergo surgical options including thoracotomy and lobectomy.

PP45

INTRAPULMONARY BRONCHOGENIC CYST- A CASE REPORT

Jefri A, A R Ismail, Vendargon S, Rasul S , Norhaimaz M M, Velmuthu M, Latip A, Fahim A R
Department of Cardiothoracic Surgery, Hospital Sultanah Aminah, Johor Bahru, Johor, Malaysia

INTRODUCTION

Bronchogenic cysts are congenital cystic lesions originating from abnormal budding of the primitive ventral foregut. It is uncommon to present during adulthood. The clinical presentation is variable; some bronchogenic cysts are asymptomatic. Those that manifest later in life are usually asymptomatic at the beginning, but can eventually lead to a life threatening event from compression, infection, hemorrhage or rupture if left untreated. We describe a case of asymptomatic intrapulmonary bronchogenic cyst and discuss the treatment of this condition.

CASE REPORT

A 50-year-old female presented for work permit application. Chest radiograph showed an incidental finding of left lower lobe consolidation. She was initially treated as pneumonia and was given a course of oral Amoxycillin. However, there was no clinical improvement. Subsequently, she underwent CT Thorax which showed features suggestive of left lower lobe bronchogenic cyst. The cyst was large measuring 7 by 7cm, originating from central portion of left lower lobe and was adherent to adjacent structures. The cyst was successfully excised together with left lower lobe.

CONCLUSION

Once diagnosis of a bronchogenic cyst is suspected, removal should be advised as early as possible to avoid complications. Lobectomy is an acceptable mode of treatment especially in cases like this.

PP46

TRACHEAL ADENOCARCINOMA MASQUERADING AS BRONCHIAL ASTHMA IN A YOUNG MAN

Fauzi Azizan, Praveenna Nagaratnam
Hospital Tuanku Ampuan Najihah, Kuala Pilah, Negeri Sembilan, Malaysia

A 22 year old Indonesian man first presented to us with sudden onset of shortness of breath and wheezing after consuming theophylline. He had been diagnosed as bronchial asthma four years previously and had multiple admissions for acute exacerbations in his native country. He came to Malaysia for further treatment of his poorly controlled bronchial asthma. He was seen at a private hospital on the day prior to admission and was started on a variety of medications. He had no family history of bronchial asthma, eczema, allergic rhinitis, conjunctivitis or angioedema. Neither did he have any gastrointestinal or constitutional symptoms. He was allergic to eggs and seafood.

A diagnosis of anaphylactic reaction with acute exacerbation of bronchial asthma secondary to medication with acute respiratory acidosis was made. He was put on non- invasive ventilation, started on corticosteroids, intravenous infusion of terbutaline and regular nebulisations. All his previous medications were withheld. He once again developed severe bronchospasm requiring intubation on day three of admission. Patient then had recurrent episodes of bronchospasm and treatment was escalated with intravenous infusion of adrenaline, nebulised adrenaline, and intravenous antibiotics to cover for infection. Despite this, his condition worsened and we proceeded to investigate for other causes of recurrent bronchospasm. His chest X-Ray was reported as transient inflammation due to peribronchial thickening. A HRCT Thorax revealed circumferential wall thickness of trachea and bronchus causing airway stenosis, bilateral lung consolidation and no evidence of cryptogenic organising pneumonia or panbronchiolitis. Bronchoscopy showed a highly vascular, fungating mass all throughout the trachea and main bronchus. Tracheal tissue biopsy was reported as adenocarcinoma. He was planned for a cardiothoracic referral KIV for radiotherapy. Regrettably patient succumbed prior to that.

PP47

CASE REPORT : A CASE OF RECURRENT RESPIRATORY PAPILLOMATOSIS SUCCESSFULLY TREATED WITH ENDOSCOPIC ARGON PLASMA COAGULATION (APC) WITH NO EVIDENCE OF RECURRENCE

J L Wong[1], S T Tie[1], Y L Ting[1], J Juliza[1], Matlan M[1], J Lee[2], M R Rashid Ali[3], A Ibrahim[3], S K Kannan[3], Jamalul Azizi[3]
[1]Respiratory Unit, Department of Medicine, Sarawak General Hospital, Kuching, Sarawak, Malaysia
[2]Department of Nephrology, Sarawak General Hospital, Kuching, Sarawak, Malaysia
[3]Department of Respiratory Medicine, Queen Elizabeth Hospital 1, Kota Kinabalu, Sabah, Malaysia

INTRODUCTION
Recurrent respiratory papillomatosis (RRP) is a benign disease caused by the human papilloma virus (HPV), characterised by the formation of recurrent, epithelial neoplastic lesions in the airways. While benign, they can cause significant airway obstruction in some cases. Difficulties in treatment arise from the recurrent nature of the lesions despite repeated procedures. Other known procedures that result in deep tissue damage also cause unacceptable collateral damage to the underlying airway mucosa.

METHOD
We describe a case of recurrent papillomatosis that was successfully treated with argon plasma coagulation (APC) when laser and electrocautery ablation had failed in the past.

RESULTS
After the papillomatasis was treated with APC, there was no recurrence on repeat bronchoscopy at 4 months and 9 months after the initial procedure. The procedure was done as a day case and there was no complication from the procedure.

CONCLUSION
The property of APC allows it to cause only superficial thermal damage to the tissue and makes it a suitable adjunct therapy for the treatment of papillomas, which are usually superficial lesions.

PP48

A CASE REPORT OF BRONCHOALVEOLAR CARCINOMA PRESENTING AS MENINGITIS

Aishah I, A K Goon, Abdul Razak M
Institut Perubatan Respiratori, Kuala Lumpur, Malaysia

Bronchiolaoalveolar presenting as meningitis is rare. Though clinical presentation is varied, typical presentation is insidious and majority are asymptomatic at diagnosis (K S Lee 1997). Patients with bronchioloalveolar carcinoma tend to be of young age at diagnosis and female.

We report a case of bronchioloalveolar carcinoma with atypical presentation.

A 35 year old lady was admitted with cough and headache. Fundal examination revealed bilateral papilloedema. Chest radiograph and lumbar puncture characteristics were suggestive of tuberculous meningitis. Magnetic resonance imaging of brain showed meningeal enhancement with cerebritis. She was diagnosed with disseminated tuberculosis and was commenced on anti tuberculous treatment with steroid cover.

Three weeks later she developed multiple complications associated with anti-tuberculous treatment which necessitated treatment to be withheld. Repeat brain imaging and lumbar puncture were done with similar results.

As there was no clinical improvement, bronchoscopy was performed. Bronchoalveolar lavage revealed malignant cells consistent with non small cell cancer.

Computed tomography of thorax, abdomen and pelvis showed reticular nodular changes with ground glass opacities within liver and spleen, as well as bilateral adrenal and bony lesions.

Due to the extent of her disease, she was planned for palliative care. She deteriorated and succumbed 2 weeks later.

In conclusion, bronchioloalveolar carcinoma has a wide spectrum of clinical manifestation. Radiographic differential diagnoses are broad and include both benign and malignant disease. Clinicians should suspect bronchioloalveolar carcinoma if there are clinical and radiological findings suggestive of miliary tuberculosis but the patient does not respond to anti-tuberculous therapy.

PP49

ONE UNFORTUNATE PATIENT: A CASE OF TRIPLE PATHOLOGY IN A 68-YEAR-OLD LADY

H Y Lam, Mohd Fauzi, K Abu Yamin, Basheer A K, M K Hamzah
Department of Caridiothoracic Surgery, Penang Hospital, Penang, Malaysia

This case study focuses on a sixty-eight-year-old lady with triple malignancies, namely, left breast carcinoma, right lung (upper lobe) bronchioalveolar carcinoma and right chest wall giant cell tumour, all of which developed at different times. The histological types were adenocarcinoma of the breast, non-mucinous type bronchioalveolar carcinoma and giant cell tumour of right chest wall. The left breast cancer had been treated with left mastectomy followed by chemotherapy and radiotherapy 14 years ago, whereas right upper lobectomy had been performed 7 months previously for the bronchioalveolar carcinoma. Patient was presented with a chief complaint of dyspnoea on mild exertion and the last malignancy was detected from surveillance CT thorax. Right rethoracotomy, rib resection, excision of tumour and prolene mesh patch repair was performed. Intra-operatively, this large, vascular and hard tumour measuring 13 x 8cm which was protruding through the previous thoracotomy wound was excised. Patient made an uneventful recovery.

PP50

RARE BUT REAL

Kasuma M N, Ashari Y
Institut Perubatan Respiratori, Kuala Lumpur, Malaysia

BACKGROUND
Most malignant primary lung tumors are carcinomas and are rarely of sarcomatous origin. The three most common sarcomas are leiomyosarcoma, malignant fibrous histiocytoma, and synovial sarcoma.

CASE
We report a case of rare Primary Pulmonary Synovial Sarcoma in 21 year old Malay lady and non smoker. She presented with pleuritic chest pain and multiple right cervical lymph nodes in early September 2012 to private hospital. On further questioning she had intermittent fever, constitutional symptoms and night sweats. The initial blood investigations showed normochromic normocytic anemia with raised erythrocyte sedimentation rate. She underwent excisional lymph nodes biopsy that showed atypical lymphocytes. She later became more breathless and subsequent radiograph showed massive right pleural effusion. Computer tomography (CT) thorax revealed huge right mediastinal mass 20x 14x14cm with superior vena cava obstruction and thrombus. There was also multiple mediastinal lymphadenopathy with right pleural effusion. Right chest tube was inserted and drained blood stained effusion. Pleural biopsy and fluid cytology failed to reveal the diagnosis. Transthoracic CT guided lung biopsy reported vacuolated cuboidal carcinoma cells with moderate pleomorphic, hyperchromatic nuclei with spindle cells and elongated hyperchromatic tumor cells. Immunohistochemistry staining was positive for cytokeratin and vimentin, negative for CD99 and calretinin hence suggestive of primary pulmonary synovial sarcoma.

CONCLUSION
Primary pulmonary synovial sarcoma is a rare tumor arising from mesenchymal cell origin with distinct clinical and pathological features. The tumor itself is very aggressive and carries a poor prognosis. Surgical excision with clear margins and possibly adjuvant chemo-radiotherapy is the currently accepted treatment.

PP51

USE OF RIGID BRONCHOSCOPE TO RELIEVE STRIDOR SECONDARY TO OCCLUSIVE ENDOBRONCHIAL MASS

Soma B C K, George John, Rahmat Othman, G Haridass
Department of Thoracic & General Surgery, Hospital Sultan Abdul Halim, Sungai Petani, Kedah, Malaysia

Rigid bronchoscopy is a rigid, straight, hollow metal tube with varying sizes for airway access to the trachea and mainstem bronchi. Initially introduced in the 1970's, it is not only a diagnostic tool but also a therapeutic tool. It provides a larger airway access as compared to a flexible bronchoscope and allows for larger tissue biopsies. Other uses of rigid bronchoscope include removal of foreign bodies obstructing airways, destroying growths via laser resection, deploying tracheobronchiol stents and debulking of endobronchial tumours where necessary.

A 54year old Malay female presented to us acutely with stridor preceded by chronic cough for 3 months and haemoptysis for 2 weeks. She also gave a history of significant loss of weight of 15kg in the past 3 months. A chest x-ray showed minimal right lower zone haziness. Flexible bronchoscopy revealed a mass arising from the left main bronchus resulting in total occlusion. The tumour was shown to extend into the primary carina and the right main stem bronchus. However the airways distal to the right main bronchus appear patent. A CT scan thorax showed features of bronchogenic carcinoma with local infiltration arising from the left main bronchus and subcarina region causing complete left bronchial obstruction with extension into the right main bronchus. The tumour showed bronchoalveolar spread with extensive mediastinal lymphadenopathy on the CT scan. We proceeded with rigid bronchoscopy and debulking of the endobronchial mass for her. Post procedure she was comfortable in the ward with no more stridor. Histopathological evaluation confirmed the lesion to be adenocarcinoma. The patient has been referred to the oncologist for chemotheraphy.

CONCLUSION:
Rigid bronchoscopy is a safe, old and useful tool which can be used to relieve stridor in patients presenting with occlusive endobronchiol tumours.

PP52

BRONCHOSCOPIC REMOVAL OF A RARE ENDOBRONCHIAL GLOMUS TUMOR

Muhammad Redzwan S Rashid Ali, Arfian Ibrahim, K K Sivaraman Kannan
Department of Respiratory, Hospital Queen Elizabeth 1, Kota Kinabalu, Sabah, Malaysia

INTRODUCTION

Endobronchial glomus tumors are rarely reported in the literature. It can be subcategorised as solid glomus tumor, glomangioma, or glomangiomyoma, depending on the relative prominence of glomus cells, vascular structures, and smooth muscle. We report a case of an endobronchial benign glomus tumor in our centre.

CASE SUMMARY

A 53 year old man who had undergone radical cystectomy, left nephrectomy and ileal conduit formation for transitional bladder cell carcinoma 3 months previously presented with a short history of haemoptysis and was referred to our centre. Rigid bronchoscopy revealed a soft polypoid lesion arising from the posteromedial wall of the left main bronchus with near total obstruction . It was removed using ND YAG laser and Argon Plasma Coagulation (APC) without complication. Histopathological examination revealed benign glomus tumor. He was well 3 months later with no recurrence of the tumor.

DISCUSSION

To our knowledge this is the 34th reported case of glomus tumor arising from the respiratory tract, 7th reported case of an endobronchial tumor treated bronchoscopically and the 1st in relation to a patient with primary transitional bladder cell carcinoma. Differential diagnosis of an endobronchial glomus tumor includes carcinoid tumour, sclerosing hemangioma, haemangiopericytoma, leiomyoma and in this case, metastasis from bladder carcinoma as the primary. Usual methods of treatment for endobronchial glomus tumors in case reports are bronchoscopic removal with ND YAG laser, electrocautery and APC with low recurrence rates.

PP53

TUNNEL INDWELLING PLEURAL CATHETER AS A BRIDGING THERAPY IN REFRACTORY CHYLOTHORAX

N H Yahya[1], H L Tan[1], Halim A G[1], Andrea Y L Ban[1], Roslan H[1], Sobri Muda[2] , R Abd Manap[1]
[1]Department of Medicine,Universiti Kebangsaan Malaysia Medical Centre, Kuala Lumpur, Malaysia
[2]Department of Radiology,Universiti Kebangsaan Malaysia Medical Centre, Kuala Lumpur, Malaysia

INTRODUCTION

Chlylothorax as a presentation of pleural effusion in systemic lupus erythematous [SLE] is rare. We report a case of refractory bilateral chylothorax in an SLE patient with unsuccessful medical pleurodesis requiring surgical intervention. A tunneled pleural catheter was used as bridging therapy in chylothorax and to date this is the first case in our centre.

CASE REPORT

A 29 year-old Malay woman was diagnosed with SLE in December 2011 when she presented with bilateral exudative pleural effusion. S he was treated with IV methylprednisolone and azathioprine. She underwent a pleuroscopy in September 2012 and left sided talc pleurodesis in March 2013 for recurrent bilateral pleural effusion. A right chylothorax in April 2013 was confirmed by the high level of pleural fluid triglycerides. The fluid had rapidly accumulated within 5 days causing respiratory failure for which she required intubation. Subsequently, she developed left sided chylothorax. Surgical pleurodesis was planned as a definitive management. Tunnel indwelling pleural catheter using permanent catheter was inserted on the left side in order to provide continuous long term drainage of the rapidly accumulating chylothorax. It would also allow surgical pleurodesis to take place by allowing apposition of the visceral and parietal pleurae.

CONCLUSION

Indwelling pleural catheter may be considered as a bridging option in chylothorax refractory to pleurodesis whilst waiting for definitive surgical pleuorodesis.

A CASE OF PULMONARY EPITHELOID HEMANGIOENDOTHELIOMA PRESUMED TO BE SECONDARY METASTASES FROM A MALIGNANT PHYLLOIDES TUMOUR

Soma B C K, George John, Rahmat Othman, G Haridass
Department of Thoracic & General Surgery, Hospital Sultan Abdul Halim, Sungai Petani, Kedah, Malaysia

Pulmonary Epitheloid Hemangioendothelioma (PEH) is a rare vascular tumour formerly known as intravascular bronchoalveolar tumour (IVBAT). It has a intermediate histological course in between hemangioma and angiosarcoma. This disease has a female preponderance with an incidence of 1:1,000,000 worldwide. PEH may present with multiple small lung parenchymal nodules ranging less than 2cm or as a solitary nodule up to 5cm. Most patients presenting with this disease are asymptomatic; however some may present with hemoptysis, dyspnoea, chest pain or constitutional symptoms. Literature states that few cases were reported to show anti-tumour response to chemotheraphy and interferon. However complete surgical resection remains the mainstay of treatment.

A 31year old Malay female was referred to our centre with what was presumed to be secondary lung metastases post wide local excision of a malignant phylloides tumour of her right breast. A plain chest x-ray and CT scan thorax done revealed lung nodules in her right lung apical and middle lobes. A PET scan done showed both nodules to be mildly FDG avid. We proceeded with a video assisted thoracoscopy with wedge resection of her right upper and middle lobe nodules. The histopathological study done revealed low to intermediate grade of vascular tumour spreading into adjacent bronchioles and alveolar spaces. Resected margins appeared to be negative.

CONCLUSION

This unique lesion which was masquerading as secondary lung metastases was confirmed by histology and immunohistochemical staining and has to be kept in mind as a differential diagnosis.

A CASE REPORT OF BRONCHIAL THERMOPLASTY

L Ahmad Fisal[1,2], A Samsudin[1], S E S Syed Haidzir[1,3], M K Razak[1], J A Abdul Rahaman[1]

[1]Respiratory Unit Serdang Hospital, Selangor, Malaysia
[2]Universiti Putra Malaysia, Selangor, Malaysia
[3]Angkatan Tentera Malaysia, Kuala Lumpur, Malaysia

BACKGROUND

Bronchial thermoplasty (BT) is a novel treatment modality reserved for severe refractory asthma where radiofrequency ablation of airway smooth muscle results in a reduction of bronchoconstriction during an exacerbation. In our clinical case report we present two patients with severe refractory asthma who had undergone BT.

CASES

The first patient was a 22-year-old female college student who suffered with asthma since childhood associated with an extensive history of allergies, rhinitis and gastro-oesophageal reflux disease. She had regular exacerbations with repeated endotracheal intubations. Her Asthma Control Test (ACT) score was between 9-15 with FEV1 averaging at 40% predicted. She was on maximal asthma therapy including omalizumab.

The second patient was a 56-year-old female retired storekeeper who suffered with adult onset asthma. She too had regular exacerbations with a history of endotracheal intubation. Her ACT score was similarly off-target with FEV1 averaging at 60% predicted. She was on maximal asthma therapy, requiring frequent courses of rescue oral corticosteroids. They underwent 3 sessions of BT under general anaesthesia 3 weeks apart. Both patients had post-procedure exacerbations which responded to standard medical therapy. The first patient responded well to BT, and oral corticosteroids were discontinued. The second patient did not fare as well since she continued to suffer from regular exacerbations but has not required endotracheal intubation since BT.

CONCLUSION

BT is designed as an adjunct therapy rather than replacing standard treatment in severe refractory asthma. It has been shown to improve asthma symptoms, quality of life and reduce exacerbations. In our limited experience, treatment outcome has been rather mixed which may indicate the need for better patient selection criteria to identify those who will benefit most from BT.

PP56

THE ROLE OF OMALIZUMAB IN SEVERE PERSISTENT ASTHMA IN MALAYSIAN CHILDREN: A REPORT OF TWO CASES

Mariana D
Hospital Raja Perempuan Zainab II, Kota Bharu, Kelantan, Malaysia

BACKGROUND
Omalizumab, an anti-IgE agent is indicated in step 5 in the GINA guideline. Two cases of severe persistent/uncontrolled asthma despite standard therapy and oral corticosteroids were treated with Omalizumab. This is the first report that describes the use of Omalizumab in childhood asthma in Malaysia.

Case 1. A 10 year old Malay boy suffered from severe persistent/uncontrolled asthma despite high dose combination treatment (inhaled corticosteroid (ICS) and long-acting B2-agonist (LABA)) and oral leukotriene-receptor antagonist (LTRA) with good compliance and proper technique. Despite treatment, he required multiple hospital admissions almost monthly with prolonged stay. He has brittle asthma which fluctuated and changed dramatically. His quality of life was severely affected. He rarely attended school or played and his parents had poor sleep. Despite oral corticosteroids, his asthma was uncontrolled. His total IgE level was 1091 kU/L and he had high specific IgE to shrimp. Omalizumab was started in August 2012 and he had remarkable improvement in symptoms and lung function without significant side-effects. His asthma became controlled after third dose of Omalizumab.

Case 2. A 9 year old Malay girl had severe persistent/uncontrolled asthma and co-morbidities of persistent allergic rhinitis and idiopathic urticaria despite a standard step 5 therapy. Her symptoms became partly controlled after starting oral corticosteroids. Her total IgE was 1140kU/L and specific IgE was high to house-dust mites, cockroach and most of seafood. Omalizumab was started in December 2012 and she showed significant improvement clinically. Her asthma and allergic rhinitis become controlled as well her skin condition. She complained of dizziness post-injection but no other serious adverse events.

CONCLUSION
Theses case reports show that Omalizumab is feasible, safe and effective in treating severe persistent/uncontrolled asthma in children.

PP57

DIFFUSE PANBRONCHIOLITIS MIMICKING MILIARY PULMONARY TUBERCULOSIS

A A Muhammad Naimmuddin[1], Y C Kuan[1], S H How[1]
[2]Kulliyah of Medicine, International Islamic University Malaysia, Kuantan, Pahang, Malaysia

Diffuse panbronchiolitis (DPB) is a rare inflammatory pulmonary disease characterized by extensive inflammation involving small airways that leads to fibrosis, traction bronchiectasis, cor pulmonale and respiratory failure if remained untreated. This condition is commonly seen in Japan and rare elsewhere. In miliary pulmonary tuberculosis (TB), millet-seed appearance may also be seen in other conditions including DPB. Typically, direct smears for acid-fast bacilli were negative and this leads to over-reliance to empirical anti-tuberculous treatment that further increases the likelihood to miss rare mimics such as DPB.

We report a 22-year old Malay man presented with productive cough for 8 months associated with weight loss. On lung examination, there was generalised coarse crepitations. He has good oxygen saturation. His chest radiograph showed miliary pattern but other TB work-up were all negative. He was empirically treated with anti-tuberculous treatment but no response noted that led to further investigations. HRCT thorax showed diffuse tree-in-bud appearance with centrilobular nodules and traction bronchiectasis. Lung function test showed mixed obstructive-restrictive pattern. Thus long-term macrolide therapy was prescribed with marked clinical improvement and slight improvement in lung function test but similar radiographic appearances were noted. This case illustrates the importance of high-index of suspicions of DPB and its early treatment with long-term macrolide antibiotics. Since there is no confirmatory test to diagnose DPB, the relevant clinical criteria should be utilised. In prevalent areas, a lung biopsy is often not needed to make the diagnosis, and clinical criteria are used instead. Conversely, in non-prevalent areas, the diagnosis is based on the clinical criteria aided by histopathologic examination to exclude other disease process. Notably, in presumed non-endemic areas such as Malaysia, further epidemiological studies are essential since DPB is frequently under diagnosed.

PP58

SHRINKING LUNG SYNDROME – A CAUSE OF PROLONGED MORBIDITY IN A PATIENT WITH SYSTEMIC LUPUS ERYTHEMATOSUS

H Baharuddin[1], T S T Ismail[1], M Mohd Zain[2], A Rosman[2]
[1]Faculty of Medicine, Universiti Teknologi MARA, Selangor, Malaysia
[2]Rheumatology Department, Hospital Selayang, Selangor, Malaysia

Shrinking lung syndrome is a rare manifestation of systemic lupus erythematosus (SLE). Due to its rarity, diagnosis may be delayed and patients are at risk of significant morbidity.

We report a case of shrinking lung syndrome in which the patient's main complaint was dyspnoea.

A 32 year old lady was diagnosed with SLE in April, 2009 when she presented with oral ulcers, alopecia, pericardial effusion and cutaneous vasculitis. She tested positive for anti-nuclear antibodies (ANA) and her complement levels were low. She presented with dyspnoea in January 2010, January 2011 and March, 2011. Examination during each admission revealed reduced breath sounds on the right lung up to midzone. E ach time, she was treated for pneumonia and flare of SLE with serositis, nephritis and mild leucopenia. On the third admission she was also treated for pulmonary embolism and she was referred twice to intensive care unit for mechanical intubation. Chest x-ray repeatedly showed a small lung volume with raised right hemidiaphragm. An echocardiogram showed normal pulmonary artery pressure. CT pulmonary angiogram showed no evidence of pulmonary embolism and a VQ scan showed a low probability of pulmonary embolism. A high resolution CT, done in inspiration and expiration showed normal lung architecture, with no pleural effusion or thickening. Lung function test showed a restrictive pattern with FEV1/FVC of 100. In August 2011, after almost a year and 8 months of having symptoms of shortness of breath, we diagnosed her with shrinking lung syndrome.

PP59

A CASE OF CATAMENIAL PNEUMOTHORAX

Sazaly Haidzir[1], Liza Fisal[2], Anand Sachithanandan[3], Jamalul A Rahaman[3]
[1]Institut Perubatan Respiratori, Kuala Lumpur, Malaysia
[2]Universiti Putra Malaysia, Selangor, Malaysia
[3]Hospital Serdang, Selangor, Malaysia

Catamenial pneumothorax (CP) is a spontaneous pneumothorax (SP) that occurs in women of menstrual age.

A 40 year old Malay female presented to the emergency department with right sided pleuritic chest pain and dyspnoea. She had similar recurring presentations peri-menstrually for the past 8 months and was symptomatically treated by a general practitioner. Chest x-ray revealed right pneumothorax requiring chest tube insertion. She was referred to the surgical team after initial medical thoracoscopy showed no obvious pleural pathology. Video-assisted thoracoscopy (VATS) performed during menstruation revealed multiple diaphragmatic fenestrations and she underwent bullectomy, pleurectomy, diaphragmatic pleural abrasion and PTFE mesh application over the fenestrated diaphragm. Hormonal therapy was also prescribed by the gynaecology team.

CP, although the commonest presentation of thoracic endometrial syndrome, is a rare disorder. Diagnosis has improved over the years because of advances in endoscopic techniques and a higher level of clinical suspicion. A number of hypotheses have been suggested to explain the aetiology of CP which include migration of air into the thoracic cavity through diaphragmatic fenestrations and porosities, diaphragmatic defects that are caused by endometriosis, metastatic spreading of endometriosis through uterine veins into the venous system and increase in prostaglandin F2 during menses causing vasospasm thus destroying alveolar cells hence pneumothorax.

VATS is the gold standard modality for both the definitive diagnosis and surgical treatment of CP. Addition of hormonal therapy post-operatively has been a preferred option recently.

High index of clinical suspicion and multidisciplinary approach can lead to accurate diagnosis and appropriate treatment strategies for CP.

PP60

RIFAMPICIN-INDUCED ACUTE RENAL FAILURE

Z H Liew, W Y Tan
Hospital Sultanah Nora Ismail, Batu Pahat, Johor, Malaysia

INTRODUCTION

Rifampicin is a key drug in tuberculosis (TB) treatment. Serious side effects due to rifampicin are uncommon. Most of the adverse reactions reported are minor. Acute renal failure complicating rifampicin therapy may rarely occur.

CASE STUDY

In this case study, we describe a 62-year-old lady, with previous history of pulmonary tuberculosis having completed treatment in 1992 who presented to us with reactivation of pulmonary tuberculosis in February 2013. She was prescribed with a fixed dose combination of anti-TB drugs and subsequently developed generalized skin rashes with pruritus. She was then referred to medical department Hospital Sultanah Nora Ismail, Batu Pahat for allergic skin reaction due to anti-TB drug for drug challenge. Anti-TB medication was withheld for 7days and individual drugs were introduced then started one after another. There was no adverse reaction with the introduction of isoniazid; however, she developed skin rashes and acute renal failure when rifampicin was added. Her renal function continued to deteriorate despite stopping rifampicin. She required haemodialysis throughout her 1-month hospital stay. Her renal function slowly recovered and she was discharged. For treatment of pulmonary tuberculosis, she was put on isoniazid, pyrazinamide and ethambutol for nine months.

CONCLUSION

The development of rifampicin-induced acute renal failure is associated with intermittent or interrupted therapy. The mechanism of this complication is immune-related. Prognosis for renal function is usually good.

PP61

A 67-YEAR-OLD WOMAN WITH CRYPTOGENIC ORGANIZING PNEUMONIA

Shefenas Baharudin , Fauzi Azizan A Aziz
Hospital Tuanku Ampuan Najihah, Negeri Sembilan, Malaysia

A 67-year-old woman with multiple medical problems was transferred from a private hospital to our hospital with complaint of difficulty in breathing for two weeks. She was intubated while in the private hospital because of respiratory distress and was given multiple broad spectrum antibiotics including antifungal therapy. She was extubated after a few days but was dependant on 15litres/minute high-flow-mask oxygen till the day she was sent to us. Computed tomography thorax shows bilateral patchy ground glass opacity, patches of consolidation were seen bilaterally which are peripherally located, and dilated bronchi were seen within the consolidation, features in keeping with alveolitis and pneumonic changes – COP/BOOP. She was started on prednisolone and all antibiotics were withheld. After starting prednisolone, her oxygen was reduced gradually and after 17 days, she was weaned off oxygen and discharged on prednisolone. She was reviewed in our clinic and prednisolone was tapered down further. Her repeat computed tomography thorax revealed that the alveolitis and pneumonia had resolved with residual bibasal mild fibrosis and pleural thickening. Cryptogenic organizing pneumonia (COP) corresponds to the presence of buds of granulation tissue in the lumen of the distal pulmonary airspaces. It has no etiologic specificity, and may thus be encountered in a variety of inflammatory pulmonary disorders. Corticosteroids are the current standard treatment of COP.

REFERENCE

Jean-Francois 2004.

PP62

TREATMENT OF LYMPHANGIOLEIOMYOMATOSIS WITH SIROLIMUS IN A YOUNG WOMAN WITH RECURRENT BILATERAL PNEUMOTHORACES

Andrea Y L Ban[1], Sherillia A Sharif[1], Sree Raman[2], R Abd Manap[1], Roslan H[1]

[1]University Kebangsaan Malaysia Medical Centre, Kuala Lumpur, Malaysia

[2]Hospital Seremban, Seremban, Negeri Sembilan, Malaysia

INTRODUCTION

Lymphangioleiomyomatosis (LAM) is a rare systemic disease affecting mainly young females in the reproductive age group. LAM causes smooth muscle proliferation in the perilymphatics of the lung causing cystic destruction, leading to respiratory failure. Sirolimus has been shown to decrease the rate of decline of FEV1 in these patients. We present a patient who was given sirolimus for 4 months resulting in a resolution of a single bulla and improvement in the FEV1. To date this is the first case of LAM treated with Sirolimus in Malaysia.

CASE REPORT

A 26-year old woman presented to another hospital with bilateral pneumothoraces. Imaging done revealed bilateral diffuse multiple thin walled cysts. She was transferred to our hospital for further management. We proceeded with a pleuroscopy and talc pleurodesis of her right lung and a bullectomy on her left lung via video assisted thoracoscopy (VATS) with pleurodesis. We initiated sirolimus at 1 mg bd in this patient. She developed mild mucositis and acne-like rash on the nape of her neck both of which were self-limiting. She completed 4 months of sirolimus. Her lung function showed improvement in the FEV1and a repeat CT scan thorax showed resolution of a bulla in her right lung.

CONCLUSION

Sirolimus is useful in treatment of lymphangioleiomyomatosis. It should be considered as a treatment option in patients with LAM with recurrent pneumothoraces and poor lung function.

PP63

CASE REPORT: CUTANEOUS MYCOBACTERIUM HAEMOPHILUM INFECTION IN RENAL TRANSPLANT PATIENT

R Abd Rahman[1], N Mohd Marzuki[1], F Y B Bin[2]

[1]Institute of Respiratory Medicine, Kuala Lumpur, Malaysia

[2]Universiti Tunku Abdul Rahman, Kuala Lumpur, Malaysia

INTRODUCTION

Mycobacterium haemophilum is a nontuberculous mycobacterium that is increasingly recognised as a cause of infection, most commonly cutaneous infection in immunocompromised patients. The clinical manifestations varies from erythematous plaque or nodules that become tender and suppurative, to cysts, scaly plaques or focal panniculitis.

CASE PRESENTATION

We report a case of a 52-year old Indian man who presented with skin lesion which was described as multiple ulcerated nodules and sinuses on the upper limbs, trunk, scalp and lower limbs. He had undergone renal transplant and was on immunosuppressant medications. He was initially treated with topical medication but the skin lesion persisted. In view of that skin biopsy was done and showed granuloma-like formation and tissue culture was positive for Mycobacterium haemophilum. He responded well to combination treatment of antibiotics.

CONCLUSION

Cutaneous Mycobacterium haemophilum infections are most often the result of HIV or transplantation associated immunosuppression. They can present with a variety of cutaneous manifestations, which require high index of suspicion. Treatment with combination of antibiotics is recommended.

REFERENCES

Shah M K, Sabti A, Kiehn T E et al. Mycobacterium haemophilum in immunocompromised patients. Clin Infect Dis 2001:33:330-7.

1 Atypical Mycobacteria. Chris A Gentry. Pharm. D.

2 M.M Gordon, H.E Wilson, F.R Duthie, B.Jones and M. Field. When typical is atypical: mycobacterium infection mimicking cutaneous vasculitis. Rheumatology 2002,41:685-690

PP64

A MALAYSIAN PATIENT WITH RAPID-ONSET OBESITY WITH HYPOTHALAMIC DYSFUNCTION, HYPOVENTILATION AND AUTONOMIC DYSREGULATION (ROHHAD)

J Y K Tan[1], W T Keng[2], L H Ngu[2], H B Chew[2]
[1]Genetics Department, Hospital Kuala Lumpur, Kuala Lumpur, Malaysia
[2]Department of Paediatrics, Universiti of Malaya, Kuala Lumpur, Malaysia

OBJECTIVE
A diagnosis of rapid-onset obesity with hypothalamic dysfunction, hypoventilation and autonomic dysregulation (ROHHAD) is suggested by alveolar hypoventilation plus one or more of the following: rapid onset obesity, hypoprolactinaemia, disordered water balance, central hypothyroidism, failed GH stimulation test, corticotrophin deficiency and delayed/precocious puberty. Some patients have association neural crest tumours. The disease maybe complicated by potentially fatal respiratory arrests. Its aetiology remains unknown.

METHOD
In this case report we describe a 14 year old Malaysian boy who was in good health with normal development until the age of 2. He then developed hyperphagic obesity, hypersomnolence, seizures, alveolar hypoventilation, central hypothyroidism, sodium and water dysregulation, gastrointestinal dysmotility, strabismus, disordered temperature and irregular heart rate, altered sweating, delayed puberty, mental retardation and recurrent respiratory tract infections. We highlight the difficulty of achieving the diagnosis of ROHHAD syndrome since it mimics both common obesity and genetic obesity syndromes along with several endocrine disorders during early childhood. We also report the first ever results of CSF neurotransmitter analysis in ROHHAD syndrome patients.

CONCLUSION
The management of ROHHAD syndrome is largely supportive. High index of suspicion may allow early diagnosis and support to avert the potentially fatal respiratory arrests.

PP65

A CASE REPORT: CRYPTOCOCCOSIS IN IMMUNOCOMPETENT PERSON PRESENTED WITH LUNG MASS

A Samsudin, L Ahmad Fisal, J A Abdul Rahaman, E L Tan, I Mansor, Simon Matthews
Hospital Serdang, Selangor, Malaysia

BACKGROUND
Cryptococcal infection is commonly seen in immnonocompromised population with T-cell immune defect. Post splenectomy patients are not at increased risk of fungal infection. A few cases of cryptococcal infection in immunocompetent patients, either limited or disseminated have been reported.

A 45 year old technician at an electronics factory, who was an active smoker presented with chronic non productive cough for 3 months and significant loss of weight. He has no fever or headache. He had no contact with avian excreta. The PTB workup had been negative at a health clinic. He had splenectomy done in year 2000 for uncertain indication and he was a hepatitis B carrier. The CXR showed single mass like lesion at the left upper lobe. The CT Thorax revealed multiple bilateral lung and subpleural nodules of varying sizes with a lobulated, heterogenous mass seen at the apicoposterior segment of the left upper lobe measuring 5.0 cm x 3.0 cm x 4.2 cm. A CT guided biopsy of the lesion was performed as the lesion was peripheral and histopathological examination (HPE) revealed encapsulated organisms suggestive of Cryptococcus species. While waiting for HPE result, the patient was admitted for symptomatic cryptococcal meningitis. His cerebrospinal fluid from lumbar puncture grew the same organism and Cryptococcal antigen was positive in the serum. He responded very well to intravenous amphotericin B (induction phase) for 4 weeks and is currently on oral fluconazole (maintenance therapy).

CONCLUSION
Fungal infection in the lungs may mimic lung malignancy.

PP66

PERSISTENT LEFT LOWER LOBE COLLAPSE IN A PATIENT AFTER PLICATION OF LEFT DIAPHRAGM & REPAIR OF TOTAL ANOMALOUS PULMONARY VENOUS DRAINAGE (TAPVD)

P Y Tan, Rus Anida Awang
Penang Hospital, Penang, Malaysia

Pulmonary complications including diaghragmatic hernia leading to recurrent pneumonias are recognised complications of congenital heart disease repair.

We report a case that underwent surgical repair of total anomalous pulmonary venous drainage (TAPVD), patent ductus arteriosus (PDA) ligation and atrial septal defect (ASD) patch closure during neonatal period. He presented with two episodes of pneumonia at the age of six months and was diagnosed to have left diaphragmatic paralysis. He was supported with nocturnal continuous positive airway pressure (CPAP) for persistent left lower lobe collapse while waiting for plication surgery which was carried out at nine months of age. However, post-surgery, he still suffered episodes of pneumonia with persistent left lower lobe collapse despite the use of CPAP. His contrast enhanced computed tomography (CECT) thorax showed narrowing of the left main bronchus with no external compression and left lower lobe collapse. He underwent bronchoscopy which showed slight indentation at distal part of left main bronchus at anterolateral side which was not feasible for stenting. He is awaiting surgical review for left lower lobe lobectomy.

We feel that this case highlight the importance of considering focal airway narrowing as a cause of persistent lung collapse and recurrent pneumonia.

PP67

RECURRENT PNEUMONIA POST TRACHEOESOPHAGEAL FISTULA (TOF) REPAIR

H S Koay, Rus Anida Awang
Penang Hospital, Penang, Malaysia

Recurrent pneumonia after TOF repair is a recognised complication. We describe a child who had TOF repaired at birth, who was eventually found to have narrowing of left main bronchus secondary to endobronchial mass.

Irfan is a two year-old boy with tracheo-oesophageal fistula type C repaired at birth

together with colostomy for imperforated anus. He was planned for PSARP but the operation had been postponed many times because he became unwell every 4-6 weeks with fever and cough probably due to pneumonia. He was also failing to thrive. We first reviewed him when he was 1 year 10 months old, when he was admitted for pneumonia in Penang Hospital. There were localised finding in his left chest with reduced breath sounds, crepitations and stridor which disappeared when he was well on follow-up. CECT thorax showed narrowing of left main bronchus with possible granulation tissue and also tracheomalacia. Since he was considered to be at risk of recurrent pneumonia from distal atelectasis, he underwent bronchoscopy with successful bronchodilation /stenting /removal of mass from left main bronchus. Since then, he has been asymptomatic.

We conclude that the presence of the focal airway narrowing should be considered when dealing with recurrent pneumonia. The endobronchial mass in this case was unrelated to TOF.

CYSTIC FIBROSIS: PSEUDO-BARTTER AS AN INITIAL PRESENTATION

S C Su, A R Noor Zehan, M Z Norzila
Department of Paediatrics, Institute of Paediatric, Hospital Kuala Lumpur, Kuala Lumpur, Malaysia

INTRODUCTION:
Infants with cystic fibrosis are prone to develop episodes of hyponatraemic, hypochloraemic dehydration with metabolic alkalosis, which are biochemical hallmarks of pseudo-Bartter syndrome.

OBJECTIVE:
To report 3 cases of cystic fibrosis which presented with pseudo-Bartter syndrome as their initial presentation.

METHODOLOGY:
A case report

RESULTS:
Of 12 patients with cystic fibrosis, 3 (25%) presented with pseudo-Bartter as the initial presentation. All 3 of them presented in their infancy with chronic cough, failure to thrive and electrolyte imbalance (hyponatraemia, hypokalaemia and metabolic alkalosis). They were diagnosed with cystic fibrosis at 5 months, 11 months and 13 months old respectively. Two of them were initially referred to the paediatric nephrologist for probable diagnosis of Bartter syndrome. As their electrolyte imbalance and metabolic alkalosis resolved with intravenous fluids, sodium chloride and potassium chloride solutions, they were subsequently referred to the paediatric respiratory unit and diagnosis of cystic fibrosis was confirmed with positive sweat test. During follow-up, only 1 patient had another episode of pseudo-Bartter during hospitalisation for pneumonia which resolved with sodium chloride and potassium chloride solutions.

CONCLUSIONS:
Cystic fibrosis should be considered in the differential diagnosis of infants presenting with symptoms and electrolyte abnormalities mimicking Bartter syndrome. Early diagnosis is important in the management of these patients.