MALAYSIAN THORACIC SOCIETY ANNUAL CONGRESS 2020

10 - 13 DECEMBER, 2020

Organised by:

Date: 10th – 13th December 2020

PROGRAMME BOOK

MTS 2020 Virtual Congress Secretariat:
Suite 3B-15-7, Level 15, Block 3B
Plaza Sentral, Jalan Stesen Sentral 5
50470 Kuala Lumpur
Malaysia
Tel: +603-2859 0289/+603 2856 4053
HP: +6012 494 0289
Fax: +603-2856 4195
Email: m.thoracicsociety@gmail.com
Website: http://2020.mts.org.my/

MALAYSIAN THORACIC SOCIETY OFFICE BEARERS

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VICE-PRESIDENT	Assoc Prof Dr Ahmad Izuanuddin Ismail
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HON TREASURER	Dr Jessie De Bruyne
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PROGRAMME SUMMARY

Day 1: Thursday, 10th December 2020

Time	Programme
	CONGRESS WORKSHOP
1130 – 1700	**Workshop 1 (Virtual Workshop)** **Nicotine Addiction & E-Cigarette/ Vaping Product Use Associated Lung Injury (EVALI)**
1845 – 1935	**SPONSORED SYMPOSIUM 1 (Orient Europharma)**

Day 2: Friday, 11th December 2020

Time	Programme
0800 – 0810	**WELCOME ADDRESS**
0810 – 0850	**PLENARY 1** **Non-Invasive Ventilation – A Glimpse into the Future**
0850 – 1005	**SYMPOSIUM 1**
	S1A – MTS-APSR Joint Symposium 1: Lung Cancer **S1B – Airway Diseases** **S1C – Sleep Disordered Breathing (SDB) in Children**
1005 – 1035	**COFFEE BREAK**
1035 – 1150	**SYMPOSIUM 2**
	S2A – MTS-APSR Joint Symposium 2: Lung Cancer **S2B – Sleep Disordered Breathing** **S2C – Paediatric Aero-digestive Diseases**
1150 – 1240	**SPONSORED SYMPOSIUM 2 (AstraZeneca)**
1240 – 1430	**LUNCH AND FRIDAY PRAYERS**
1430 – 1600	**SYMPOSIUM 3**
	S3A – Interstitial Lung Disease 1 **S3B – Interventional Pulmonology** **S3C – Children with Bronchiolitis Obliterans**
1600 – 1650	**SPONSORED SYMPOSIUM 3A (Sanofi Pasteur)**
	SPONSORED SYMPOSIUM 3B (Viatris)
1650 – 1845	**COFFEE BREAK**
1845 – 1935	**SPONSORED SYMPOSIUM 4 (Merck Sharp & Dohme)**

Day 3: Saturday, 12th December 2020

Time	Programme
0800 - 0840	**PLENARY 2** **Recent COVID-19 Pandemic, Sharing Experience in Italy**
0840 – 1010	**SYMPOSIUM 4**
	S4A – Pulmonary Vascular Disease **S4B – Pleural Diseases** **S4C – Asthma and Wheezing**
1010 – 1040	**COFFEE BREAK**

PROGRAMME SUMMARY

Day 3: Saturday, 12th December 2020	
Time	**Programme**
1040 - 1210	**SYMPOSIUM 5**
	S5A - Interstitial Lung Disease 2: Case Based Discussion
	S5B – Tuberculosis in Adults
	S5C – Chronic Cough in Children
1210 - 1300	**SPONSORED SYMPOSIUM 5 (Boehringer Ingelheim)**
1300 - 1400	**LUNCH**
1400 - 1500	**SYMPOSIUM 6**
	S6A - Oral Presentation
	S6B - Poster Presentation
1500 - 1550	**SPONSORED SYMPOSIUM 6 (GlaxoSmithKline Pharmaceutical)**
1550 - 1640	**SPONSORED SYMPOSIUM 7A (Bayer)**
	SPONSORED SYMPOSIUM 7B (Merck Sharp & Dohme)
1640 - 1710	**COFFEE BREAK**
1640 - 1730	**SPONSORED SYMPOSIUM 8 (Boehringer Ingelheim)**
1730 - 1800	**Announcement of Awards (Poster & Oral)**

Day 4: Sunday, 13th December 2020	
Time	**Programme**
0830 - 0915	**KEYNOTE ADDRESS**
	Battling COVID-19 in Malaysia
0915 - 1015	**SYMPOSIUM 8**
	S8A – COVID-19 Highlights
1015 - 1040	**COFFEE BREAK**
1040 - 1130	**S8B – Thoracic Radiology**
1130 - 1245	**SYMPOSIUM 9**
	S9A – COVID-19 Highlights
	S9B – Tuberculosis in Children
1245 – 1300	**Closing Ceremony**

CONGRESS WORKSHOP

WEBINAR: NICOTINE ADDICTION & E-CIGARETTE/VAPING PRODUCT USE ASSOCIATED LUNG INJURY (EVALI)

Thursday, 10th December 2020, Webinar

Chairperson: Nurhayati Mohd Marzuki

TIME	TOPIC	SPEAKER
1130 – 1200	Registration	
1200 - 1300	E-cigarette addiction prevention and management	*Mohamad Haniki Nik Mohamed, Malaysia*
1310 - 1340	EVALI: Epidemiology and presentations	*Mohd Afiq Mohd Nor, Malaysia*
1340 - 1410	Break	
1410 - 1455	EVALI investigations	*Tie Siew Teck, Malaysia*
1505 - 1555	Imaging findings of EVALI	*Zuhanis Abdul Hamid. Malaysia*
1605 - 1655	Management of EVALI	*Tie Siew Teck, Malaysia*
1655 1700	Closing	

DAILY PROGRAMME

10th December 2020, Thursday	
1845 - 1935	**SPONSORED SYMPOSIUM 1 (SS1)** *Company:* Orient Europharma *Chairperson*: *Abdul Razak Abdul Muttalif* *Speaker: Andrea Ban Yu-Lin, Malaysia* *Topic*: Optimization of Asthma Patients' Management: Targeting the Small Airways

DAILY PROGRAMME		
11th December 2020, Friday		
0800 – 0810	**WELCOME ADDRESS** • Pang Yong Kek, Malaysia *President, Malaysian Thoracic Society* • Rozanah Abd Rahman, Malaysia *Organising Chairman, MTS 2020* • Lalitha Pereirasamy, Malaysia *Chairperson Adult Programme* • N. Fafwati Faridatul Akmar Mohammad, Malaysia *Co-Chairperson Paediatric Programme*	
0810 – 0850	**PLENARY 1 (P1)** *Chairpersons: Pang Yong Kek* Non-Invasive Ventilation – A Glimpse into the Future *Amanda Piper, Australia*	
0850 – 1005	**SYMPOSIUM 1 (S1)**	
	S1A – *MTS-APSR Joint Symposium 1: Lung Cancer* *Chairpersons: Liam Chong Kin/How Soon Hin* 1. Targeted Therapy for NSCLC – Old and New *Liam Chong Kin, Malaysia* 2. Approach to Solitary Pulmonary Nodule *Kwun Fong, Australia* 3. Lung Cancer Screening and the Impact on Thoracic Surgery *Pramoj Jindal, India*	
	S1B – *Airway Diseases* *Chairpersons: Abdul Razak Abdul Muttalif /Tan Jiunn Liang* 1. Bronchial Asthma & Short Acting B2 Agonists: The Unbreakable Affair *Andrea Ban Yu-Lin, Malaysia* 2. Pulmonary Rehabilitation & COPD *Xu HuiYing, Singapore* 3. End of Life Planning for Patients with Advanced COPD *Jaishree Sharmini Jivanadham, Malaysia*	
	S1C – *Sleep Disordered Breathing (SDB) in Children* *Chairperson: Asiah Kassim/ Noor Ain Noor Affendi* 1. Snoring in Children, When to Worry? *Hafizah Zainuddin, Malaysia* 2. Clinical Presentation of OSA in Infant *Asiah Kassim, Malaysia* 3. Principle in Management of Children with SDB *Mahesh Babu, Singapore*	
1005 - 1035	**COFFEE BREAK**	
1035 – 1150	**SYMPOSIUM 2 (S2)**	
	S2A – *MTS-APSR Joint Symposium 2: Lung Cancer* *Chairpersons: Liam Chong Kin/How Soon Hin* 1. Neoadjuvant Chemotherapy & Surgery VS Concurrent Chemoradiotherapy & Immunotherapy in Resectable N2 stage IIIA Lung Cancer: Debate *Narasimman Sathiamurthy, Malaysia/Tan Chih Kiang, Malaysia* 2. Management of Immunotherapy Related Pulmonary Toxicity *David Lam Chi Leung, Hong Kong* 3. Ground Glass Opacity - Diagnostic Approach and Management *Alan Dart Loon Sihoe, Hong Kong*	
	S2B – *Sleep Disordered Breathing* *Chairpersons: Ahmad Izuanuddin Ismail/Rashidah Yasin* 1. Long Term Treatment in Obesity Hypoventilation Syndrome:NIV vs CPAP? *Amanda Piper, Australia* 2. Treatment of Mild OSA: Should We Bother Treating It? *Tripat Deep Singh, Singapore* 3. Pre-operative Screening for OSA: Is This Evidence-based? *Ong Thun How, Singapore*	
	S2C – *Paediatric Aero-digestive Diseases* *Chairpersons: Eg Kah Peng/Su Siew Choo* 1. Assessment of Swallowing Function in Children	

	Nor Sharina Mohd Zawawi, Malaysia 2. GERD in Children *Ng Ruey Terng, Malaysia* 3. Aspiration Related Lung Disease *Patrick Chan Wai Kiong, Malaysia*	
1150 – 1240	**SPONSORED SYMPOSIUM 2 (SS2)** *Company:* AstraZeneca *Chairperson: Liam Chong Kin* *Speaker: Helmy Haja Mydin, Malaysia* *Topic*: Reframing Asthma Care: Say NO to SABA Monotherapy *Speaker: James Chung-man Ho, Hong Kong* *Topic*: Clinical Treatment Options in NSCLC Patient Harbouring EGFRm – Where does the Path Go	
1240 – 1430	**LUNCH AND FRIDAY PRAYERS**	
1430 – 1600	**SYMPOSIUM 3 (S3)**	
	S3A – *Interstitial Lung Disease 1* *Chairpersons: Syazatul Syakirin Sirol Aflah/Noorul Afidza Muhammad* 1. Antifibrotics for Fibrotic Lung Disease: Beyond Idiopathic Pulmonary Fibrosis *Chai Gin Tsen, Singapore* 2. HRCT Interpretation in Idiopathic Pulmonary Fibrosis *Aida Abdul Aziz, Malaysia* 3. Interstitial Lung Disease in CTD: Evolving Concepts of Pathogenesis and Management *Shereen Ch'ng Suyin, Malaysia*	
	S3B – *Interventional Pulmonology* *Chairpersons: Narasimman Sathiamurthy/Fauzi Md Anshar* 1. Bronchoscopic Sampling of Peripheral Lung Nodule *Melvin Tay Chee Kiang, Singapore* 2. Role of Bronchoscopy in Malignant Central Airway Obstruction *Tie Siew Teck, Malaysia* 3. Role of Biopsy in Suspicious Lung Nodules - Is It Always Necessary? *Pramoj Jindal, India*	
	S3C – *Children with Bronchiolitis Obliterans* *Chairpersons: Rus Anida Awang/Alison Ting Yih Hua* 1. Who are at Risk for Bronchiolitis Obliterans? *N. Fafwati Faridatul Akmar Mohammad, Malaysia* 2. Assessment of Children with Bronchiolitis Obliterans *Su Siew Choo, Malaysia* 3. Management of Bronchiolitis Obliterans, What's New? *Norzila Mohamed Zainuddin, Malaysia*	
1600 - 1650	**SPONSORED SYMPOSIUM 3A** *Company:* Sanofi Pasteur *Chairperson: Lalitha Pereirasamy* *Speaker: Pang Yong Kek, Malaysia* *Topic*: Influenza: A Threat to Patients with Respiratory Conditions	
	SPONOSRED SYMPOSIUM 3B *Company:* Viatris *Chairperson: Lem Li Khen* *Speaker: David Price, Australia* Topic: Management of Allergic Rhinitis in Comorbid Asthma Patients: Towards the Right Combination	
1650 - 1845	**COFFEE BREAK**	
1845 - 1935	**SPONSORED SYMPOSIUM 4** *Company:* Merck Sharp & Dohme *Chairperson: Yivonn Khoo* *Speaker: Asok Kurup, Singapore* *Topic*: Challenges in the Management of Hospital Acquired Pneumonia in the Era of Multi-drug Resistance	

DAILY PROGRAMME		
12th December 2020, Saturday		
0800 – 0840	**PLENARY 2 (P2)** *Chairperson: Azizi Hj Omar* Recent COVID-19 Pandemic, Sharing Experience in Italy *Renato Cutrera, Italy*	
0850 – 1010	**SYMPOSIUM 4 (S4)**	
	S4A – Pulmonary Vascular Diseases *Chairpersons: Roslina Abdul Manap/Nurhayati Mohd Marzuki* 1. Pulmonary Arterial Hypertension (PAH): The changing landscape of treatment *Teoh Chee Kiang, Malaysia* 2. Common Concerns in PAH: Travel, Exercise, Surgery, Pregnancy: How to Manage? *Chai Gin Tsen, Singapore* 3. Management of Pulmonary Arteriovenous Malformation *Narasimman Sathiamurthy, Malaysia*	
	S4B – *Pleural Diseases* *Chairpersons: Muhammad Redzwan S Rashid Ali/ Mohamed Faisal Abdul Hamid* 1. Practice Changing Clinical Trials in Malignant Pleural Effusions *Gary Lee, Australia* 2. Thoracic Surgery for Pleural Diseases: The Earlier the Better? *Harish Mithiran Muthiah, Singapore* 3. Pneumothorax: What is New? *Gary Lee, Australia*	
	S4C – *Asthma and Wheezing* *Chairpersons: Norzila Mohamed Zainuddin/Mariana Daud* 1. Evaluation of Pre-school Wheeze: Asthma or Not Asthma? *Jessie Anne de Bruyne, Malaysia* 2. Difficult to Treat Asthma *Alison Ting Yih Hua, Malaysia* 3. Role of Intermittent High Dose ICS in Children *Rus Anida Awang, Malaysia*	
1010 - 1040	**COFFEE BREAK**	
1040 – 1210	**SYMPOSIUM 5 (S5)**	
	S5A – *Interstitial Lung Disease 1: Case Based Discussion* *Chairperson: Noorul Afidza Muhammad/ Chantariga Benbamnan* 1. Case 1: Interstitial Lung Disease - Non IPF *Kho Sze Shyang, Malaysia* *2.* Case 2: CTD Related ILD *Lydia Pok, Malaysia* 3. Case 3: Idiopathic Pulmonary Fibrosis *Nor Suraya Samsudin, Malaysia*	
	S5B – *Tuberculosis* *Chairpersons: Zainudin Md Zin /Tan Jiunn Liang* *1.* MDR-TB: An Update *Mat Zuki Mat Jaeb, Malaysia* 2. Challenges in Diagnosis & Management of Spine Tuberculosis *Fazir Mohamad, Malaysia* 3. Latent TB: Prevent or Treat *Abdul Razak Abdul Muttalif, Malaysia*	
	S5C – *Chronic Cough in Children* *Chairpersons: Jessie Anne de Bruyne/N. Fafwati Faridatul Akmar Mohammad* 1. Chronic Cough in Children, What to Worry? *Eg Kah Peng, Malaysia* 2. Protracted Bacterial Bronchitis, Is It Real? *Ahmad Fadzil Abdullah, Malaysia* 3. Non-CF Bronchiectasis *Shangari Kunaseelan, Malaysia*	
1210 - 1300	**SPONSORED SYMPOSIUM 5 (SS5)** *Company:* Boehringer Ingelheim	

	Chairperson: Abdul Razak Abdul Muttalif *Speaker: Irfhan Ali Hyder Ali, Malaysia* *Topic*: COPD – The Present and The Future	
1300 - 1400	**LUNCH**	
1400 - 1500	**SYMPOSIUM 6 (S6)**	
	S6A – Oral Presentation *Chairpersons: Lalitha Pereirasamy/Asiah Kassim*	
	S6B – Poster Presentation	
1500 - 1550	**SPONSORED SYMPOSIUM 6 (SS6)** *Company: GlaxoSmithKline Pharmaceutical* *Chairperson: Ahmad Izuanuddin Ismail* *Speaker: Norbert Berend, Australia* Topic: Don't Compromise on Asthma Management	
1550 - 1640	**SPONSORED SYMPOSIUM 7A (SS7A)** *Company: Bayer* *Chairperson: Wan Haniza Wan Mohammad* *Speaker: Andrea Ban Yu-Lin, Malaysia* Topic: A Different Perspective of Fluroquinolones: Appropriate Use and Safety for CAP	
	SPONSORED SYMPOSIUM 7B (SS7B) *Company: Merck Sharp & Dohme* *Chairperson: How Soon Hin* *Speaker: James Chung-man Ho, Hong Kong* Topic: Latest Updates with Immune Checkpoint Inhibitors in Advanced NSCLC in 2020	
1640 - 1710	**COFFEE BREAK**	
1640 - 1730	**SPONSORED SYMPOSIUM 8 (SS8)** *Company: Boehringer Ingelheim* *Chairperson: Syazatul Syakirin Sirol Aflah* *Speaker: Felix Chua, United Kingdom* Topic: Latest Update on the First and Only Approved Treatment for SSc-ILD	
1730 - 1800	**ANNOUNCEMENT OF AWARDS (POSTER & ORAL)** *Scientific Committee: Lalitha Pereirasamy and Eg Kah Peng*	
DAILY PROGRAMME		
13th December 2020, Sunday		
0830 - 0915	**KEYNOTE ADDRESS** *Chairperson: Pang Yong Kek* Battling COVID-19 in Malaysia *Noor Hisham Abdullah, Malaysia*	
0915 - 1015	**SYMPOISUM 8 (S8)**	
	S8A – COVID-19 Highlights *Chairpersons: Pang Yong Kek/Lalitha Pereirasamy* 1. Biology of SARS-COV2 *Chan Yoke Fun, Malaysia* 2. Respiratory Support in COVID-19: Pre/Post Ventilation & ECMO *Melvin Tay Chee Kiang, Singapore*	
1015 - 1040	**COFFEE BREAK**	
1040 - 1130	***S8B – Thoracic Radiology*** *Chairperson: Hooi Lai Ngoh/Fauzi Mohd Anshar* 1. Radiology Rapid Fire – Radiology Quiz *Dennis Tan Gan Pin, Malaysia*	
1130 - 1245	**SYMPOSIUM 9 (SS9)**	
	S9A – COVID-19 Highlights *Chairpersons: Pang Yong Kek/Lalitha Pereirasamy* 1. Uptodate Clinical Management of COVID-19 *Suresh Kumar Chidambaram, Malaysia* 2. Strategies for COVID-19 Vaccine *Rebecca Harris, Singapore* 3. Long Term Care in Post COVID-19 Patients *Syazatul Syakirin Sirol Aflah, Malaysia*	
	S9B – Tuberculosis in Children	

	Chairpersons: Hafizah Zainuddin/Patrick Chan Wai Kiong 1. When to Consider TB Treatment Failure *Rina Triasih, Indonesia* 2. Contact Tracing and Latent TB Infection *Noor Ain Noor Affendi, Malaysia* 3. Multi-drug Resistant Tuberculosis *Nik Khairulddin Nik Yusoff, Malaysia*	
1245 - 1300	**CLOSING CEREMONY** *Organising Chairman: Rozanah Abd Rahman*	

LIST OF EXHIBITORS

Booth No	Company Name
1 – 2	Boehringer Ingelheim (Malaysia) Sdn Bhd
3	GlaxoSmithKline Pharmaceutical Sdn Bhd
4	Novartis Corporation (M) Sdn Bhd
5 – 6	Pfizer Malaysia Sdn Bhd
7	Viatris
8	Bayer Co (Malaysia) Sdn Bhd
9	Sanofi Pasteur
10	A. Menarini Singapore Pte Ltd
11	Cipla Malaysia Sdn Bhd
12	Somnotec (M) Sdn Bhd
13	Biomarketing Services (M) Sdn Bhd
14	Pahang Pharmacy Sdn Bhd
15	ResMed (M) Sdn. Bhd.
16	DanMedik Sdn Bhd
17	Pharmaniaga Marketing Sdn. Bhd

BOOTH LAYOUT

EVALI Workshop

E-CIGARETTE ADDICTION PREVENTION AND MANAGEMENT

Mohamad Haniki Nik Mohamed
International Islamic University Malaysia, Pahang, Malaysia

E-cigarettes are battery powered devices with chamber for holding the liquid, a mouthpiece, a battery and a heating coil that heats a liquid solution (known as e-liquid) into an aerosol mist (vapour) that is inhaled in a manner that resembles smoking. E-cigs usually contain a variable concentration of nicotine with higher amount seen for the newer generation re-fillable devices; tanks or pods. Pod devices use nicotine salts rather than 'freebase' nicotine, resulting in reduced rough throat hit associated with nicotine inhalation, allowing a higher concentration of nicotine to be inhaled than with nicotine in the basic or unionised form. Nicotine is highly addictive and is the primary psychoactive component causing addiction. This is related to the high plasma concentration achieved and rapid nicotine delivery to the receptors in the brain. These two characteristics promote development of nicotine dependence. The high concentration and rapid delivery of nicotine via e-cigs result in release of neurotransmitters such as dopamine, norepinephrine, GABA, acetylcholine and serotonin, similar to those seen with combustible cigarette smoking. Having bursts of neurotransmitters release such as dopamine increases feeling of pleasure and general well-being. Similarly, users identify with the reduction in anxiety and tension with the release of GABA, acetylcholine and serotonin. However, these effects are short-lived due to the relatively short half-life of nicotine, i.e., about 2 hours, contributing to the development of withdrawal syndrome, tolerance and craving for repeated use of nicotine. Nicotine has neurotoxic effects on the developing brain, as a "gateway" drug for cocaine and other illicit drugs. E-cigs are heavily promoted directly to users via physical and online shops, internet, social media, events, etc. According to TECMA, 10.6% of school-going adolescents aged 10-19 years were offered a free trial session of e-cigarette/vape while 7.9% were offered a free e-cigarette/ vape liquid (e-liquid). In Malaysia, nicotine is regulated as a Group C poison under the Poisons Act 1952. Hence, the current selling of e-cigs with nicotine in Malaysia is illegal. Similar to measures proposed by the WHO Framework Convention on Tobacco Control and the MPOWER strategies, more effective implementation strategies are needed to help protect Malaysians from the dangers nicotine from e-cigs, especially for our youths. Stringent actions must be taken at the local, state and national levels. The government must continue to take aggressive steps by enforcing effective regulatory authority over the manufacturing, distribution, and marketing of nicotine containing e-cigs. Ideally, banning of e-cigarettes or any similar emerging products would be the best way to ensure our future generation will be free from nicotine addiction. The health and well-being of our nation's young people depend on it.

EVALI WORKSHOP

EVALI Workshop

EVALI: EPIDEMIOLOGY AND PRESENTATIONS

Mohd Afiq Mohd Nor
University Malaya Medical Centre, Kuala Lumpur, Malaysia

E-cigarette, which is also called as “e-cig,” “vapes,” or “electronic nicotine delivery systems (ENDS)” was first invented in 2003. Subsequently, it has grown rapidly all over the world in ten years. Evidence nowadays reveal that these products are not safe to health as it can cause a myriad of lung injury patterns known as electronic cigarette or vaping associated lung injury (EVALI). The first EVALI was a case of lipoid pneumonia reported in 2012 and followed by 277 incidents reported in Europe within five years after that. The cases peaked again during the last summer until it was declared as an outbreak in US. As of February 2020, there were 2807 EVALI cases with 68 deaths had been reported in US. Majority of patients were male and almost 80 percent of them were still young (< 35 years old). Malaysia has two cases of probable reported last year from east part of the country and both were from teenage group. Common symptoms of EVALI included shortness of breath, cough, chest pain, pleuritic chest pain and hemoptysis as well as constitutional symptoms of fever and chills, nausea, vomiting, diarrhea, and abdominal pain. Many of these patients presented with tachypnea, tachycardia and hypoxemia and several of them deteriorated into respiratory failure.

PLENARY 1

NON-INVASIVE VENTILATION - A GLIMPSE INTO THE FUTURE

Amanda Piper
Woolcook Institute of Medical Research, Sydney, Australia

Populations around the globe are getting older and more obese, giving rise to more complex medical issues including respiratory failure. Home noninvasive ventilation (NIV) is considered the standard for managing chronic respiratory failure. The past decade has seen significant technological developments in home ventilators and monitoring devices, impacting our options for initiation and review of therapy. Hospital admission with polysomnography or polygraphy has been the main approach to initiating NIV for many centres. However, the development of automated modes of ventilation and the ability to remote monitor a number of key ventilation parameters is set to change the way home NIV is initiated and reviewed in the future. Phenotyping patients based on severity of disease and comorbidities will become standard practice to better match patient ventilatory needs to newer modes and features of ventilation. The current pandemic has considerably altered how patients on home ventilation are reviewed, with telemonitoring becoming more widely used and accepted by patients and health care workers alike. A better understanding of patient-ventilator asynchrony in conjunction with algorithms to automatically categorise and score these events will become more important. Techniques such as diaphragm ultrasound will provide additional tools for monitoring NIV response in the acute setting. Future studies will need to determine the impact these newer ventilation modes and service delivery have on clinical outcomes including quality of life, hospital admissions and mortality.

SYMPOSIUM 1

S1A – Airway Diseases

BRONCHIAL ASTHMA & SHORT ACTING B2 AGONISTS: THE UNBREAKABLE AFFAIR

Andrea Ban Yu-Lin
Universiti Kebangsaan Malaysia Medical Centre, Kuala Lumpur, Malaysia

Asthma is one of the most common chronic diseases in the world. Beta-2-agonist relieves asthma symptoms. Patients prefer increasing their SABA reliever therapy rather than the controller therapy when their symptoms worse. This mindset is difficult to change. This is due to the early emphasis on symptom-directed SABA monotherapy in step 1. To a certain extent this helps consolidate early reliance on SABA. Recent studies have shown that fast-onset LABA (formoterol) with inhaled corticosteroids (ICS) either alone or as a maintenance and reliever therapy (MART) has greater
efficacy and appears safer than SABA reliever therapy. While SABA monotherapy relieves symptoms it does not confer protection from exacerbations. GINA 2019 no longer recommends SABA monotherapy. The option of choice is now early and regular administration of controller therapy. The question is are we ready to make the change.

SYMPOSIUM 1

S1A – Airway Diseases

PULMONARY REHABILITATION & COPD

Xu HuiYing
Tan Tock Seng Hospital, Singapore

Chronic Obstructive Pulmonary Disease (COPD) is a debilitating condition characterized by persistent respiratory symptoms and effort limitation. Nonpharmacological therapy such as Pulmonary Rehabilitation (PR) has an important role in COPD management. PR encompasses patient-tailored therapies that include, but are not limited to, exercise training, education and behavior change, and has been shown to improve symptoms, exercise tolerance and quality of life. Despite being recommended by major societal guidelines, the uptake of PR has been challenging due to various physician, patient and logistic factors. In Tan Tock Seng Hospital (TTSH), Singapore, we incorporate pulmonary rehabilitation into Care Bundles, which are sets of evidence-based clinical interventions aimed to improve patient outcomes, for our patients' inpatient and post discharge care. In this short presentation, we hope to share our experience in implementing our COPD care bundle and the TTSH PR programme.

SYMPOSIUM 1

S1A – Airway Diseases

END OF LIFE PLANNING FOR PATIENTS WITH ADVANCED COPD

Jaishree Sharmini Jivanadham
Pulau Pinang Hospital, Pulau Pinang, Malaysia

Advanced Care Planning is a process of reflection, discussion and communication that enables a person to plan in advance for their future medical treatment and other care, for a time when they are not competent to make, or communicate, decisions for themselves. It is an ongoing discussion, where patients are given the opportunity to reflect on their values, goals and preferences. We have to recognize that each person has unique values and concerns.

Today the demographics of death are changing. In Malaysia it is estimated that every year more than 80,000 people die from chronic illnesses. Advanced care planning has shown to improve outcomes for patients and their families, including increasing the likelihood of patients' wishes being known and respected at the end of life, increasing patient and carer satisfaction and improving bereavement outcomes for families.

Advanced care planning also makes it easier for the health care team to act according to the person's preferences and even when the person lacks decision making capacity. This enables health professionals to meet their professional and legal obligations to involve the patient in decision making and obtaining informed consent for medical treatments.

There are some tools to identify appropriate patients for advance care planning and for referrals to the specialist palliative care team. It is important to identify and address palliative and supportive care needs in a timely way to help a person live as well as possible when cure is not the goal.

SYMPOSIUM 1

S1B – MTS-APSR Joint Symposium 1: Lung Cancer

TARGETED THERAPY FOR NSCLC - OLD AND NEW

Liam Chong Kin
University Malaya Medical Centre, Kuala Lumpur, Malaysia

Molecular targeted treatment with TKIs of *EGFR* mutations (gefitinib, erlotinib or afatinib), and *ALK* rearrangements as well as *ROS1* fusion (both with crizotinib) has resulted in dramatic improvements in the survival and quality of life of patients with molecularly defined advanced NSCLC. However, despite dramatic initial responses acquired resistance invariably develops with clinical disease progression after a median of 9 to 12 months. New and improved targeted therapies that can overcome resistance to earlier generation TKIs have been approved for use in the second-line setting such as osimertinib, which is selective against *T790M* mutation, the most common mechanism of resistance to first- and second-generation EGFR TKIs. In patients with previously untreated NSCLC harbouring sensitising *EGFR* mutations, osimertinib treatment results in longer progression-free and overall survival compared to first-generation EGFR TKIs, including patients with intracranial metastases. Similarly, later generation *ALK* inhibitors (ceritinib, alectinib, brigatinib and lorlatinib) being more potent and able to overcome acquired resistance to crizotinib and are active against brain metastases were initially used in the second-line setting but some are now first-line treatment options in treatment naïve patients. New targetable molecular alterations are continuously being identified in advanced NSCLC. Targeted therapy for some of these alterations including $BRAF^{V600E}$ mutation, *MET* exon 14 skipping mutation, *NTRK* and *RET* mutations are already available for use in some countries while targeted therapy of molecular targets such as $KRAS^{G12C}$, *EGFR exon 20 insertions, HER2* mutations are being actively investigated in clinical trials.

SYMPOSIUM 1

S1B – MTS-APSR Joint Symposium 1: Lung Cancer

APPROACH TO SOLITARY PULMONARY NODULE

Kwun Fong
The Prince Charles Hospital, Australia

The evaluation of a solitary pulmonary nodule is a frequent task for Respiratory specialists, and can be complex. The emerging concept of CT screening for lung cancer will also result in the need for high quality nodule management if screening programs are implemented. Management decisions are based on clinical history, size and appearance of the nodule, and feasibility of obtaining a tissue diagnosis in the context of historical imaging. The most reliable imaging features are those that are indicative of benignancy, such as a benign pattern of calcification and the conventional stable follow-up period of 2 years for solid nodules. There is increasing recognition of the unique differences with part solid nodules, which have a markedly different biology and behaviours.

Various imaging (CT, CXR, PET) modalities can be used to identify small malignant lung cancers, where resection results in high survival rates. Another important task is to avoid unnecessary surgery.in those with benign disease. Advances in bronchoscopy and EBUS complement classic TTNA for pathological confirmation of malignancy. Modern tools such as volumetrics, CAD, risk prediction can assist the clinician, who will also benefit from guideline advice. AI is anticipated to improve our diagnostic ability in future.

SYMPOSIUM 1

S1C – Sleep Disordered Breathing (SDB) in Children

SNORING IN CHILDREN, WHEN TO WORRY?

Hafizah Zainuddin

University Teknologi Mara Selayang Campus, Selangor, Malaysia

There is significant difference in prevalence of snoring in children across different countries. It was estimated to affect 8-12% of all children.

Snoring is a symptom and a sign of upper airway obstruction. It is the most common presentation of Obstructive Sleep Apnoea (OSA). Knowing snoring is common problem in children, we need to identify who need further investigation and who need to be treated. Few screening tools are available to be used to identify high risk patient.

Diagnosis of OSA can be easily missed if there is inadequate history taking during any patient's consultation. It is mandatory to ask on sleep issue as patient can present with complication of OSA ie chronic headache or hypertension as the main complaint.

Nowadays, major indication for adenotonsillectomy is OSA. However, in children, OSA is not always associated with adenotonsilar hypertrophy. Children with co-morbidities ie Down Syndrome, craniofacial abnormalities, Cerebral Palsy, micrognathia need to be evaluated carefully. These children have higher risk to develop severe OSA and associated with residual OSA postadenotonsillectomy. Overweight and obese children have higher risk to develop OSA and most likely need to be treated with nocturnal continuous positive airway pressure (CPAP) ventilation.

There is established complication on neurocognitive and cardiovascular complication related to OSA. Therefore, approach to children with snoring is very important to avoid serious complication of OSA.

SYMPOSIUM 1

S1C – Sleep Disordered Breathing (SDB) in Children

CLINICAL PRESENTATION OF OSA IN INFANT

Asiah Kassim

Hospital Tunku Azizah, Kuala Lumpur, Malaysia

Infants experience a wide range of sleep-disordered breathing patterns, including periodic breathing, apnea of prematurity, central apnea, and also obstructive sleep apnea (OSA). Obstructive sleep apnea in infants has a distinctive pathophysiology, natural history, and treatment compared with that of older children and adults. Infants have predispositions toward airway obstruction and gas exchange abnormalities because of anatomical and physiological characteristics.

Increased upper airway resistance during sleep is an essential feature of OSA in infants. Airway narrowing may result from congenital or acquired abnormalities occurring from the nose to the larynx. Laryngomalacia is the most common cause of inspiratory stridor and OSA in infants. Comorbid airway lesions have been reported in 10–50% of patients, particularly tracheomalacia and subglottic stenosis. Furthermore, obstructive sleep apnea (OSA) in infancy is often related to gastro-esophageal reflux disease, craniofacial anomalies, neuromuscular disorders, soft tissue enlargement or more often a combination of these factors, especially in subgroups of infants with complex medical issues. While adenotonsillar hypertrophy is a common etiology in older children, it is less often in infants. However, it is more common after an upper respiratory infection and may be an important contributor to OSA in infants after 6 months of age.

Route of breathing is an important nongenetic determinant of maxillary growth in infants and young children. In the presence of nasal obstruction, infants will be mouth breather and this will results in distinctive facial features of "long face syndrome" (narrow maxilla, high-arched palate, increased lower facial height) associated with OSA. These in turn may aggravate the OSA especially in high risk infants with hypotonia, craniofacial anomalies, and prematurity. The clinical presentation of OSA in infants include signs of upper airway obstruction (stetor, stridor or snoring with varying

degree of respiratory distress), feeding difficulties, failure to thrive, behavioral issues, gas exchange abnormalities, near mises and even sudden infant death.
The diagnostic modalities in infant is a challenge as proper interpretation of polysomnography requires an understanding of normative data related to gestation and postconceptual age for apnea, arousal, and oxygenation. Other important diagnostic modality in infants with obstructive apnea involves direct visualization of the upper airway as it may affects the definitive treatment options. Beside diagnostic, upper airway endoscopy also may demonstrate evidence of gastroesophageal reflux (GERD), where the incidence of GERD is increased in infants with OSA and vice versa.
Treatment options for infant obstructive sleep apnea are often dependent on the underlying etiology and severity of the conditions. Infants with severe OSA will requires definitive surgical corrections and even tracheostomy if medical treatments including CPAP fails. Of note, successful treatment of concomitant gastroesophageal reflux is also an important measure.

SYMPOSIUM 1

S1C – Sleep Disordered Breathing (SDB) in Children

PRINCIPLE IN MANAGEMENT OF CHILDREN WITH SDB

Mahesh Babu
National University Children's Medical Institute, Singapore

Adeno-tonsillectomy (T&A) has been the main stay in the management of significant obstructive sleep apnea in children for many decades. However, in the past decade, we now know that T&A has its own limitations in the management of Paediatric OSA. The session will concentrate on when to refer children with OSA for T&A. Precautions to be taken and the long term follow up required post operatively will be also discussed. The role for additional therapies like medical management and non-invasive ventilation will be explored.

SYMPOSIUM 2

S2A – MTS-APSR Joint Symposium 2: Lung Cancer

NEOADJUVANT CHEMOTHERAPY & SURGERY VS CONCURRENT CHEMORADIOTHERAPY & IMMUNOTHERAPY: DEBATE

Narasimman Sathiamurthy
Kuala Lumpur Hospital, Kuala Lumpur, Malaysia

Stage IIIA N2 NSCLC is a heterogenous group of disease (occult N2, single N2, skip N2, bulky N2, multistation N2) and one mode of treatment does not apply to all. This topic is still hotly debated in many international conferences, including MTS2020. There are many trials to refer to, but nothing seems to be conclusive suggesting one approach is better than the other. In the advent of immunotherapy, the options have become more complex. The treatment strategy should be generally guided by the various trials available, but ultimately, the regime should be catered to the local availability of expertise, resources and patients' access to treatment. In the absence of a randomised controlled trial and in the era where minimally invasive lung resection can be performed with minimal morbidity, multimodality treatment which includes surgery should be the treatment of choice for resectable N2 NSCLC.

SYMPOSIUM 2

S2A – MTS-APSR Joint Symposium 2: Lung Cancer

NEOADJUVANT CHEMOTHERAPY & SURGERY VS CONCURRENT CHEMORADIOTHERAPY & IMMUNOTHERAPY: DEBATE

Tan Chih Kiang
National Cancer Institute, Putrajaya, Malaysia

Debate is always an interesting part of a medical conference. As we pit against each other on "Neoadjuvant Chemotherapy & Surgery VS Concurrent Chemoradiatherapy & Immunotherapy", let's us walk through the evidences available, and the effectiveness of each modalities and finally decides on the winner of the debate

SYMPOSIUM 2

S2A – MTS-APSR Joint Symposium 2: Lung Cancer

MANAGEMENT OF IMMUNOTHERAPY RELATED PULMONARY TOXICITY

David Lam Chi Leung
HKU-Shenzen Hospital, China

Pulmonary toxicity happens frequently with different modality of anti-cancer treatment, may it be from immunotherapy, targeted therapy or conventional radiation therapy. Treatment-related pulmonary toxicity poses new challenges in the era of precision medicine.

Pulmonary toxicity associated with anti-cancer therapy covers a broad and overlapping spectrum of pulmonary manifestations, from acute presentation of acute respiratory distress syndrome and to subacute form like pneumonitis. The differential diagnoses of infectious and neoplastic processes might make the diagnostic process challenging. The diagnosis could be a clinical one after exclusion of infection and cancer disease progression with investigation through septic workup, relevant imaging and sometimes bronchoscopy.

It has been estimated about 3 - 6% of patients with advanced NSCLC developed pneumonitis during systemic anti-cancer therapy. Pneumonitis could be managed and reversible, especially if it presents or is recognized early. Though there are occasional reports of mild degree of pneumonitis, if managed early and appropriately, may reflect an underlying immune response triggered by relevant immune checkpoint inhibitor, the overall mortality rate of acute pneumonitis is high. The subsequent survival and functional outcome after severe pneumonitis are usually poor. In addition, pneumonitis has an adverse impact on the survival of patients with advanced NSCLC. The risk of development of pneumonitis as well as its severity is dependent on several patient and treatment related factors.

Guidelines for management of immune checkpoint inhibitor-related pulmonary toxicity are available to guide clinical management, though the exact diagnostic and management pathways relies usually on clinical judgement and a multi-disciplinary decision.

SYMPOSIUM 2

S2A – MTS-APSR Joint Symposium 2: Lung Cancer

GROUND GLASS OPACITY - DIAGNOSTIC APPROACH AND MANAGEMENT

Alan Dart Loon Sihoe
International Medical Centre, China

Low-Dose Computed Tomography (LDCT) Screening has been proven to be potentially the single greatest advance for reducing lung cancer mortality. The by-product of increasing screening worldwide will be the ever-growing numbers of Ground-Glass Opacity (GGO) lesions that will be discovered in asymptomatic persons.

There is evidence to show that many – if not most – GGOs are benign lesions or so-called 'indolent' cancers. It has therefore been suggested that widespread LDCT use may result in excessive investigations and 'over-diagnosis'. In recognition of this, guidelines have typically recommended relatively conservative approaches based on CT surveillance. However, the reliability of imaging to determine malignant potential is questionable, and these expectant approaches do not safeguard those patients with genuine invasive cancers that will progress.

Should intervention be considered for GGOs, traditional modalities of biopsy often have low diagnostic yields, yet surgery has previously been considered overly aggressive. Today, 'next generation' surgical techniques – such as Uniportal surgery and advanced segmentectomy – offer truly minimal morbidity coupled with proven diagnostic and therapeutic efficacy. The latest technologies allow unprecedented precision in locating, resecting, and even ablating pulmonary GGO lesions. These advances may help bridge the gap between over-diagnosis and under-treatment in selected patients with GGOs.

This presentation will provide an overview of current views on GGO management and introduce some of the developments that may shape multi-disciplinary approaches to GGOs in the coming years.

SYMPOSIUM 2

S2B – Sleep Disordered Breathing

LONG TERM TREATMENT IN OBESITY SYNDROME: NIV vs CPAP?

Amanda Piper
Woolcook Institute of Medical Research, Sydney, Australia

Obesity hypoventilation syndrome (OHS) is diagnosed when an obese individual (BMI>30kg.m^{-2}) presents with awake hypercapnia ($PaCO_2 \geq 45$mmHg) after other factors that could better explain hypoventilation have been excluded. Two major phenotypes of this disorder have been described. The majority of those with OHS have concurrent severe obstructive sleep apnea (OHS+OSA). Pure hypoventilation alone is seen in around 10% of patients with OHS. Bilevel non-invasive ventilation therapy is considered the mainstay for this latter group, although only one randomised trial has been conducted. Those allocated to bilevel therapy over a median follow up period of 5 years showed significant longitudinal improvements in awake blood gases, quality of life and daytime sleepiness compared to lifestyle modification only (1). However, no difference in hospitalisation days per year between groups was seen. In stable ambulatory patients with OHS+OSA, there has been considerable uncertainty around what form of PAP therapy, CPAP or bilevel PAP, provides the most effective therapy long term for this condition. Over the last 2 to 3 years, publicatons arising out of the large, long-term Pickwick trial conducted by the Spanish Sleep Network, have shed considerable light on this issue (2,3). Although bilevel PAP may correct awake CO2 and reduce pulmonary artery pressure slightly more rapidly over the first one or two of treatment, longer term follow up (>3 years) found no significant difference between CPAP and bilevel therapy in

hospitalisation days, hospital resource utilisation, blood pressure, respiratory function, health-related quality of life, cardiovascular events, improvement in pulmonary hypertension and left ventricular diastolic dysfunction, or mortality (2,3). While CPAP is now considered to be an appropriate initial therapy in patients with stable OHS+OSA, not all individuals will respond positively to this simpler option. Those presenting higher initial awake respiratory failure (4), poorer lung function, older age, less severe OSA or recent acute respiratory failure may be less likely to respond to CPAP (5). So while CPAP therapy may be more cost-effective than bilevel therapy for managing stable OHS patients

(6), close monitoring over the first few months of therapy is needed to ensure an appropriate response to therapy is achieved, with a switch to bilevel therapy if needed.

1. Masa JF et al. Long-term Noninvasive Ventilation in Obesity Hypoventilation Syndrome Without Severe OSA: The Pickwick Randomized Controlled Trial. Chest 2020;158(3):1176-1186.
2. Masa JF et al Long-term clinical effectiveness of continuous positive airway pressure therapy versus non-invasive ventilation therapy in patients with obesity hypoventilation syndrome: a multicentre, open-label, randomised controlled trial. Lancet 2019;393(10182):1721-1732.
3. Masa JF et al. Echocardiographic Changes with Positive Airway Pressure Therapy in Obesity Hypoventilation Syndrome. Long-Term Pickwick Randomized Controlled Clinical Trial. Am J Respir Crit Care Med 2020;201(5):586-597
4. Howard ME et al. A randomised controlled trial of CPAP versus non-invasive ventilation for initial treatment of obesity hypoventilation syndrome. Thorax 2017;72(5):437-444.
5. Mokhlesi B et al. Evaluation and Management of Obesity Hypoventilation Syndrome. An Official American Thoracic Society Clinical Practice Guideline. Am J Respir Crit Care Med 2019;200(3):e6-e24.
6. Masa JF et al. Cost-effectiveness of positive airway pressure modalities in obesity hypoventilation syndrome with severe obstructive sleep apnoea. Thorax 2020;75(6):459-467.

SYMPOSIUM 2

S2B – Sleep Disordered Breathing

PRE-OPERATIVE SCREENING FOR OSA: IS THIS EVIDENCE-BASED?

Ong Thun How
Singapore General Hospital, Singapore

Sleep Apnea is known to be prevalent,and thought to increase the risk of perioperative complications. But it is notoriously underdiagnosed, and tedious to manage, especially if your patient is not coming to you complaining of an a priori sleep complaint and just wants to get on with his or her surgery and life. In this talk, we will briefly address the evidence for why we'd want to screen for sleep apnea, how to do it, and what to do with the results.

SYMPOSIUM 2

S2C – Paediatric Aero-Digestive Diseases

ASSESSMENT OF SWALLOWING FUNCTION IN CHILDREN

Nor Sharina Mohd Zawawi
Universiti Kebangsaan Malaysia Medical Centre, Kuala Lumpur, Malaysia

Supporting a child to achieve their physical and cognitive growth potential requires an adequate consumption of nutrition. Understanding a safe and effective swallowing function in a child requires clinicians to have a broad understanding about the anatomy and physiology of swallowing as well as the developmental aspects of feeding. Swallowing assessment begins with a comprehensive history taking that covers the underlying medical problems, feeding behaviour and development milestones of a child. This is followed by a comprehensive clinical assessment of feeding and swallowing function. Instrumental assessment, such as Videofluroscopy of Swallowing (VFSS) or Flexible Endoscopic Examination of Swallowing (FEES) may be performed to support the clinical findings and diagnosis. As issues in feeding and swallowing disorders are typically multifaceted in nature, collaboration with other professionals is highly recommended to ensure holistic management in these children with swallowing disorder is implemented.

SYMPOSIUM 2

S2C – Paediatric Aero-Digestive Diseases

GERD IN CHILDREN

Ng Ruey Terng
University Malaya Medical Centre, Kuala Lumpur, Malaysia

Gastroesophageal reflux (GER), the involuntary passage of gastric contents into the esophagus, occurs several times per day in every human, particularly after meals, and is a completely normal physiologic process. Gastroesophageal reflux disease (GERD) occurs when GER causes troublesome symptoms and/ or complications. Diagnosis and management of GER and GERD in infants and children remains a challenge, as none of the signs and symptoms of GER and GERD are specific and there is no gold standard diagnostic test or tool. Overdiagnosis and overtreatment with medications, mainly acid inhibitors, is common. A lack of evidence of efficacy together with emerging evidence of significant harm, particularly with gastric acid blockade strongly suggest that treatment agents should be used sparingly, especially is preterm infants. The rapid rising prevalence of obesity is causing a rising prevalence of GERD.

SYMPOSIUM 2

S2C – Paediatric Aero-Digestive Diseases

ASPIRATION RELATED LUNG DISEASE

Patrick Chan Wai Kiong
Gleneagles Medical Centre , Kuala Lumpur, Malaysia

Swallowing is a rather complex process and requires a normal anatomy and neuromuscular function of the oral, nasal, pharyngeal, laryngeal and upper gastrointestinal systems. Any impairment of this complex process can result in passage of foreign material into the airways below the subglottis; known as aspiration.

Aspiration related lung disease involves several clinical syndromes. A sudden massive aspiration will cause an acute dramatic event with significant respiratory distress and repeat small aspirations may cause chronic and recurrent respiratory symptoms. The growing lung is particularly vulnerable to insults from aspiration.

Several categories of children are at increased risk of aspiration related lung disease that include congenital cranio-facial and airway abnormalities, neurological and muscular disorders. The role of aspiration in lung disease in normal children is less well understood.

Proving that aspiration is responsible for the respiratory syndrome includes the use of video-fluroscopy swallow study and fiberoptic endoscopic evaluation of swallowing (FEES).

Management of children with aspiration lung disease involves a multi-disciplinary team that must address the underlying disease, the lung damage and the speech/swallowing pathology.

SYMPOSIUM 3

S3A – Interstitial Lung Disease 1

ANTIFIBROTICS FOR FIBROTIC LUNG DISEASE: BEYOND IDIOPATHIC PULMONARY FIBROSIS

Chai Gin Tsen
Tan Tock Seng Hospital, Singapore

The anti-fibrotics Pirfenidone and Nintedanib are currently considered standard of care in patients with idiopathic pulmonary fibrosis (IPF). They reduce the rate of decline by about 50% in the forced vital capacity in the lung function over one year. There are other types of fibrotic interstitial lung diseases (f-ILD) other than IPF that have shared genetic, pathophysiological mechanisms and disease behaviour with IPF. It is biologically plausible that anti-fibrotics may be efficacious in these f-ILDs. In this presentation, we will explore the scientific basis of using anti-fibrotics in other f-ILDs, the evolving concept of progressive fibrotic ILDs and the landmark studies exploring the use of anti-fibrotics in these other f-ILDs.

SYMPOSIUM 3

S3A – Interstitial Lung Disease 1

HRCT INTERPRETATION IN IDIOPATHIC PULMONARY FIBROSIS

Aida Abdul Aziz
Sungai Buloh Hospital, Selangor, Malaysia

HRCT Thorax plays an important role in diagnosis of IPF (Idiopathic Pulmonary Fibrosis). Recognition specific pattern for IPF in line with latest international guideline is essential in improving communication between pulmonologists and radiologists. The knowledge of UIP pattern in HRCT Thorax, its variants, the overlaps and its arrays of differential is essential in order to grasp a final diagnosis, in which multidisciplinary discussion plays an important role as well. Thus, this lecture will outline the Typical and Atypical Imaging in IPF, its overlaps as well as the important entity of Progressive Fibrosing ILD. I will also include additional important points / relevant negatives to highlight in Imaging of IPF, especially of those which are clinically significant.

SYMPOSIUM 3

S3A – Interstitial Lung Disease 1

INTERSTITIAL LUNG DISEASE IN CTD: EVOLVING CONCEPTS OF PATHOGENESIS AND MANAGEMENT

Shereen Ch'ng Suyin
Selayang Hospital, Selangor, Malaysia

Interstitial Lung Disease (ILD) associated with connective tissue diseases (CTD) is a significant cause of morbidity and mortality. Evolving understanding and identification of pathways and biomarkers involved in the pathogenesis of ILD may provide insights towards the screening, diagnosis and management of CTD-ILD. ILD patterns are hereterogenous and the disease course may be variable. A subset of patients have progressive ILD, with is associated with higher mortality and hence, will require treatment initiation. Multi-disciplinary evaluation is increasingly recognised as essential in the evaluation and management of CTD-ILD. Current recommendations for systemic sclerosis-ILD (SSc-ILD) highlight the need for early detection of disease through screening, identifying patients who are at risk for progression and close monitoring of all patients. Data from treatment trials in SSc support the use of immunosuppressive therapy. Anti-fibrotics are also now considered a potential therapeutic option in CTD-ILD based on results from recent trials. There are still signficant gaps in our knowledge about the pathogenesis of CTD-ILD and effective therapeutic management interventions and strategies are needed.

SYMPOSIUM 3

S3C – Children with Bronchiolitis Obliterans

WHO ARE AT RISK FOR BRONCHIOLITIS OBLITERANS?

N. Fafwati Faridatul Akmar Mohammad
Hospital Tunku Azizah, Kuala Lumpur, Malaysia

Bronchiolitis obliterans (BO) is a rare form of chronic irreversible obstructive lung disease in children that results from an insult to the lower respiratory tract. BO is characterised by inflammation and fibrosis of the terminal and respiratory bronchioles leading to narrowing and/or complete obliteration of the airway lumen. BO can be divided into two categories: proliferative BO and constrictive BO.

The most common form of BO in children follows severe lower respiratory tract infection. In many parts of the world, post infectious BO (PIBO) is most commonly associated with Adenovirus infection. However, the prevalence of PIBO varies and the reason for difference may include adenovirus serotype and one's genetic predisposition and immunologic response to developing BO. BO appears to be more common in Southern hemisphere, with an increased prevalence in certain ethnicities. Adenovirus serotypes 3, 7, 11 and 21, and also in children needing mechanical ventilation following these infection has been shown to be the risk factors to develop BO. There are also reports of PIBO secondary to influenza, parainfluenza, measles, varicella virus and Mycoplasma pneumonia.

Other causes of BO has been described such as Steven Johnson Syndrome, inhalation of toxins, recurrent aspiration and bone marrow transplant.

SYMPOSIUM 3

S3C – Children with Bronchiolitis Obliterans

ASSESSMENT OF CHILDREN WITH BRONCHIOLITIS OBLITERANS

Su Siew Choo

Hospital Tengku Ampuan Rahimah, Selangor, Malaysia

Bronchiolitis obliterans (BO) is defined as partial or total occlusion of respiratory and terminal bronchiole lumen by inflammatory tissue and fibrosis following a severe insult to the lower respiratory tract. The commonest form of BO in children follows a severe lower respiratory tract infection, known as post-infectious BO (PIBO) with Adenovirus being the leading infectious cause of PIBO worldwide.

Even though lung biopsy is the gold standard for the diagnosis of BO, PIBO is diagnosed from a summation of clinical, microbiological and radiological information complemented by lung function testing. Typical clinical history of persistent hypoxaemia and respiratory symptoms after a severe pneumonia or bronchiolitis in a previously healthy child with non-specific signs of crackles, wheeze or hyperinflation should raise the suspicion of PIBO.

Spirometry typically shows fixed or irreversible airway obstruction with evidence of air trapping (increased residual volume and residual volume/total lung capacity ratio) on plethysmography.

Chest X-rays may demonstrate non-specific changes of hyperinflation, peribronchial thickening, atelectasis or bronchiectasis. High resolution computed tomography (HRCT) of the thorax plays a central role for the diagnosis of PIBO with mosaic attenuation being the most distinctive finding of PIBO, followed by other non-specific changes of peribronchial wall thickening, atelectasis, air trapping and bronchiectasis.

The prognosis of children with PIBO seems to be better than children with BO post bone marrow and lung transplant. Their clinical course varies with three different patterns of progression after an initial insult, which are (1) an imperceptible start and slow but steady deterioration, (2) an initially rapid deterioration followed by a stable state, or (3) a rapid deterioration after the initial insult.

As children with PIBO have significant airway obstruction at diagnosis and have dysanaptic growth of their lungs and airways, they should be monitored regularly with lung function test and monitored for their functional capacity with the 6-minute walk test.

SYMPOSIUM 3

S3C – Children with Bronchiolitis Obliterans

MANAGEMENT OF BRONCHIOLITIS OBLITERANS, WHAT'S NEW?

Norzila Mohamed Zainuddin

Sunway Medical Centre, Selangor, Malaysia

Treatment of post- infectious bronchiolitis obliterans (PIBO) is empirical. In general, the treatment is supportive and anti-inflammatory to impair lymphocyte proliferation and activation since inflammation plays an important role in the pathogenesis. Ideally, corticosteroids should be given early during the developing disease process and before airway fibrosis is established

Azithromycin has been used in treating bronchiolitis obliterans post-transplant with improvement in FEV^{1}. However, its role in treating PIBO are scarce. Although there are no RCTs in children with PIBO, oral azithromycin 10 mg/kg given three times weekly is recommended as longterm management.

Single centers have reported to use a combination therapy of fluticasone azithromycin and montelukast in PIBO. Although this treatment option is safe, no formal trials have been conducted yet. Chronic obstructive airway disease and hyperinflation play an important role in the pathophysiology of PIBO, the data does not show a significant post bronchodilator response to 400-600ug salbutamol. Supportive treatment includes no smoking, yearly influenza vaccination, respiratory physiotherapy, supplemental oxygen and nutritional support.

PLENARY 2

RECENT COVID-19 PANDEMIC, SHARING EXPERIENCE IN ITALY

Renato Cutrera
Pediatric Hospital "Bambino Gesù", Roma, Italy

Pediatric Pulmonology & Respiratory Intermediate Care Unit, Sleep and Long-Term Ventilation Unit, Academic Department of Pediatrics (DPUO), Pediatric Hospital "Bambino Gesù" Research Institute, Piazza S. Onofrio 4, 00165, Rome, Italy.
Since the end of December 2019, Coronavirus infection has rapidly spread worldwide becoming the first pandemic of the 21st century. European countries have been hit much harder than Asian nations. Italy was the first European country that had to deal with this pandemic; despite the containment measures and lockdown ordered by the Italian Government, the number of infected people progressively increased.
SARS-CoV-2 infection in children differs from adult disease with respect to clinical manifestations and outcome. Children, particularly those younger than 12 to 14 years of age, appear to be affected less commonly than adults. Fever is the most common reported symptom, but also gastrointestinal manifestations are frequent. Data on features of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) in children and adolescents are scarce and case fatality in paediatric age is very low, and often related to associated comorbidities.
Despite the unfolding of containment measures, a new wave is affecting Italy. It is well known that the safest and most controlled way for effective and sustainable prevention of viral infections in a population is to have an efficacious and safe vaccine and the majority of the population successfully vaccinated. The rapid progression of new vaccine candidates against SARS-CoV-2 into pre-clinical and clinical studies is encouraging.

SYMPOSIUM 4

S4A – Pulmonary Vascular Diseases

PULMONARY ARTERIAL HYPERTENSION (PAH): THE CHANGING LANDSCAPE OF TREATMENT

Teoh Chee Kiang
National Heart Institute, Kuala Lumpur, Malaysia

Pulmonary arterial hypertension (PAH) is a chronic progressive disease which is associated with high morbidity and mortality. It has a prevalence of 10-52 cases per million of population and mainly affects female.

PAH is a disease entity caused by an increase in pulmonary vascular resistance defined as a mean pulmonary arterial pressure of more than 20mmHg at rest (which was 25mmHg previously), pulmonary capillary wedge pressure less than 15mmHg and pulmonary vascular resistance more than 3 woods unit. This is the new hemodynamic definition proposed in 6th world symposium on pulmonary hypertension in 2018. PAH can be classified into five groups according to the basis of pathophysiology, clinical presentation and therapeutic options.

I am sharing a case study, 31 years old young lady with no known medical history, presented with unexplained shortness of breath on exertion. She was in New York Heart Association functional class III-IV. She was referred to my hospital after noticed features of pulmonary hypertension on echocardiogram. The diagnosis of PAH was confirmed after right heart catheterization. Despite upfront combination therapy of pulmonary vasodilators, she passed away 2 years and 10 months after diagnosis.

The goals in treatment of PAH is to preserved right ventricular function thus preventing clinical deterioration. Early detection by using screening tools can improve clinical outcome. The current available treatment of PAH divided into 3 groups, drugs that augment nitrous oxide or guanylate cyclase stimulator, endothelin receptor antagonist and prostacyclin. There is a growing evidence for starting multiple medications at the time of diagnosis or upfront rather than using sequential addition to prevent clinical deterioration.

SYMPOSIUM 4

S4A – Pulmonary Vascular Diseases

COMMON CONCERNS IN PAH: TRAVEL, EXERCISE, SURGERY, PREGNANCY: HOW TO MANAGE?

Chai Gin Tsen
Tan Tock Seng Hospital, Singapore

Pulmonary hypertension is a rare disease and is defined haemodynamically via a right heart catheterization where the resting mean pulmonary pressure is above 20 mmHg and pulmonary vascular resistance of more than and equals to 3 Woods Unit. This presentation explores the pathophysiology of pulmonary hypertension and how it affects the cardiovascular function in each of these four scenarios. This is followed by discussion of the practicalities in investigations and management strategies of these scenarios.

SYMPOSIUM 4

S4A – Pulmonary Vascular Diseases

MANAGEMENT OF PULMONARY ARTERIOVENOUS MALFORMATION

Narasimman Sathiamurthy
Kuala Lumpur Hospital, Malaysia

Pulmonary arteriovenous malformations (AVM) are rare and described as abnormal communication between the pulmonary arteries and veins, bypassing the capillary bed. Pulmonary AVMs can be classified as simple or complex, and majority are congenital. 53%-70% of pulmonary AVMs involve the lower lobe of lungs, with 40% of the patients presenting with neurological complications.

Treatment modalities for pulmonary AVM has evolved over the decades. Traditionally, treatment was administered to symptomatic patients, asymptomatic patients with AVMs of more than 3mm, patients with progressive enlargement of AVM, and for patients with paradoxic embolization. In untreated patients, morbidity rate was recorded to be 50% and morality rate was 11%. Treatment modalities include embolization, surgery and hormonal treatment.

Surgery has been the mainstay of treatment for pulmonary AVM before 1978. The 1st successful surgery was recorded in 1942, where Hepburn and Dauphinee reported the disappearance of patient's polycythemia and digital clubbing following pneumonectomy for pulmonary haemangioma. In 1945, Packard and Waring reported the successful treatment of a 31-year-old male with ligation of pulmonary artery. Surgical options for pulmonary AVM include ligation, local excision, segmentectomy, lobectomy and pneumonectomy. Lung transplant is considered for patients with diffuse bilateral disease, but this endeavor is rarely undertaken.

We will discuss the management of pulmonary AVM and visualize the challenges faced in resecting a pulmonary AVM by Uniportal Video Assisted Thoracic Surgery performed in Hospital Kuala Lumpur

SYMPOSIUM 4

S4B – Plural Diseases

THORACIC SURGERY FOR PLEURAL DISEASES: THE EARLIER THE BETTER?

Harish Mithiran Muthiah
National University Hospital, Singapore

Pleural diseases are commonly encountered in thoracic surgery. The decision to intervene early is always in contention and the decision mostly depends on the experience of the physician and surgeon. This presentation will discuss on the role of a thoracic surgeon in managing the most commonly encountered pleural diseases and the evidence to intervene early.

SYMPOSIUM 4

S4C – Asthma & Wheezing

EVALUATION OF PRE-SCHOOL WHEEZE: ASTHMA OR NOT ASTHMA?

Jessie Anne de Bruyne
University Malaya Medical Centre, Kuala Lumpur, Malaysia

Pre-school wheeze is a common condition with many causes and making a diagnosis helps with prognostication and management. Firstly, the presence of wheeze needs to be confirmed as what is described as wheeze is not always so. A careful history is paramount in the diagnosis of asthma. Asthma is far more likely in atopic children and those with a family history of atopy. Children with interval symptoms between episodes of wheeze and those who have triggers other than just viral infections are also more likely to have asthma.
In making a diagnosis, other treatable conditions such as recurrent infection due to immunodeficiency, recurrent aspiration from various causes, cardiac conditions, etc. should also be entertained so as to commence early treatment and prevent complications
It can be difficult if not impossible to predict if preschool wheeze is asthma. Sometimes, preschool wheeze requires watchful waiting with symptomatic treatment and a trial of preventer treatment for those with more troublesome symptoms. Fortunately for many preschool children wheeze will not persist, and the majority do not need preventive treatment.

SYMPOSIUM 4

S4C – Asthma & Wheezing

DIFFICULT TO TREAT ASTHMA

Alison Ting Yih-Hua
Timberland Medical Centre, Kuching, Malaysia

Asthma is the most common chronic condition of childhood. It is a disease with a wide clinical spectrum and variations in its presentation, aetiology and pathophysiology. Despite advances in medical science, it continues to contribute to significant morbidity and mortality worldwide. Effective therapies exist however a small subset of children have problematic asthma. This difficult to treat asthma refers to patients whose asthma require significant treatment, GINA Step 4 or 5, to attain control and reduce risk of exacerbations. It can also refer to those whose condition remain uncontrolled despite this high level of maintenance treatment and controller therapies.

Successful management extends beyond asthma pharmacotherapy and requires a systematic age appropriate approach to assessment and management to address the various factors that render the condition difficult to manage. Most important is an objective evaluation to establish and ensure the correct diagnosis. It requires a thorough assessment to address multimorbidity; a review of the use of individualised treatments, its delivery and adherence

and attention to psychosocial factors and eliminating environmental triggers. A systematic approach to the assessment of this complex group of children, its rationale and components will be discussed.

SYMPOSIUM 4

S4C – Asthma & Wheezing

ROLE OF INTERMITTENT HIGH DOSE ICS IN CHILDREN

Rus Anida Awang
Penang Hospital, Penang, Malaysia

Inhaled corticosteroid is the mainstay of treatment for children with asthma and wheezing. It has an anti-inflammatory property and had been shown in many researches to be effective in children and adult with asthma. It forms the gold standard, first-line therapy in asthma which reduces morbidity and mortality.

In GINA 2020 Guidelines on asthma and intermittent wheezing in children below 12 years old, intermittent high dose inhaled corticosteroid was not suggested as the controller or initiation treatment in any of the steps. In step 1 (intermittent wheezing or asthma) **intermittent low dose ICS** was suggested when the wheezing episodes are occurring more frequently. In step 2 (mild persistent) three options were given and the first option is daily low dose ICS followed by daily montelukast or **intermittent low dose ICS**. In step 3 medium dose ICS or low dose ICS in combination with LABA or LTRA were suggested. In step 4 high dose ICS in combination with LABA or LTRA were the options suggested.

Study by Oborne and colleagues suggests that at least **quadrupling the dose of ICS** may be an effective **yellow zone strategy** in adults, and the Step-up Yellow Zone Inhaled Corticosteroids to Prevent Exacerbations (STICS) trial, addressing this guideline gap in children 5–11 years of age is currently ongoing in AsthmaNet.

Recent meta-analysis looking at the role of high dose ICS for **asthma exacerbation (intermittent high dose ICS)** with seven eligible studies met the criteria for analysis. The ICS had a significant reduction in hospital admission **compared with placebo** in overall with odds ratio of 0.63 (95% confidence interval [CI]: 0.41–0.96) and in moderate-to-severe group with odds ratio of 0.17 (95% CI: 0.05–0.51). **Comparing with systemic corticosteroid** (SC), ICS had significantly lower hospital admissions overall and in mild-to-moderate group with odds ratios of 0.63 and 0.26, respectively. **The combination of ICS and SC** had odds ratio of 0.75 (95% CI: 0.57–0.99) over SC in moderate-to-severe asthma exacerbation. In conclusion, high dose ICS significantly reduced hospital admission in asthma exacerbation in children. The benefit is significant in the moderate-to-severe asthma exacerbation group.

A Cochrane review of twelve trials concluded no benefit of adding ICS in reducing the **relapse rate of acute asthma**. Therefore, the continuation use of high dose ICS post-discharge from emergency department or ward can't be recommended in children.

Prolonged use of high dose ICS carries a risk of systemic side effects, including adrenal suppression or crisis, growth retardation in children and adolescents, decrease in bone mineral density, cataract and glaucoma. A range of psychological or behavioural effects may also occur. These include psychomotor hyperactivity, sleep disorders, anxiety, depression and aggression, particularly in children.

SYMPOSIUM 5

S5A – Interstitial Lung Disease 2: Case Based Discussion

CASE 1: INTERSTITIAL LUNG DISEASE - NON IPF (IPR PRESENTER)

Kho Sze Shyang
Institut Perubatan Respiratori, Kuala Lumpur, Malaysia

Usual interstitial pneumonia (UIP) is a histopathologic and radiologic pattern of interstitial lung disease, the hallmark pattern of idiopathic pulmonary fibrosis (IPF). However, a substantial amount of connective tissue disease associated interstitial lung disease (CTD-ILD) can present as UIP pattern as well. In this case presentation, we described a 72 years old lady who presented with progressive exertional dyspnea, associated with productive cough for six months duration.

High resolution computed tomography (HRCT) thorax demonstrated definite UIP pattern. In this case presentation, we will discuss the diagnostic approach to radiological UIP pattern, and review the clinical and radiological features which may aid in the differentiation of IPF from non-IPF causes when encountering a radiological UIP pattern.

SYMPOSIUM 5

S5A – Interstitial Lung Disease 2: Case Based Discussion

CASE 2: CTD RELATED ILD (HOSPITAL SELAYANG PRESENTER)

Lydia Pok
Selayang Hospital, Selangor, Malaysia

ILD may manifest in several rheumatic diseases such as systemic sclerosis, mixed connective tissue disease, rheumatoid arthritis and systemic lupus erythematosus. CTD-ILD contributes to the morbidity and mortality of patients with CTD and as such, early recognition and management of ILD is of paramount importance. Three (3) cases of CTD-related ILD will be discussed:
Case 1: Systemic sclerosis-ILD
Case 2: MCTD-ILD

SYMPOSIUM 5

S5A – Interstitial Lung Disease 2: Case Based Discussion

CASE 3: IDIOPATHIC PULMONARY FIBROSIS (IPR PRESENTER)

Nor Suraya Samsudin
Institut Perubatan Respiratori, Kuala Lumpur, Malaysia

Idiopathic pulmonary fibrosis will have the usual interstitial pneumonia pattern on HRCT and biopsy. In this case presentation we described a 60 years old man with multiple co-morbidities presented with progressive dyspnea in which HRCT revealed non typical usual interstitial pneumonia pattern with positive antinuclear antibody. We will discuss on diagnostic approach and clinical progress of this patient upon treatment.

SYMPOSIUM 5

S5B – Tuberculosis

MDR-TB: AN UPDATE

Mat Zuki Mat Jaeb
Hospital Raja Perempuan Zainab 2, Kelantan, Malaysia

Significant progress in molecular diagnosis for MDR-TB and more effective medicines in recent years has led to earlier detection and higher success rates among patients with MDR/RR-TB respectively. In the last decades, evidence-based policy recommendations on the treatment and care of patients with DR-TB have been published by World Health Organisation (WHO). A new drug classification and recommendations for the treatment of MDR-TB based on large individual patient data meta-analysis from 25 countries in 2018 and other studies was released in March 2019, which showed significantly higher treatment success and reduced death of pulmonary MDR-TB after administration of the newer drugs such as bedaquiline or repurposed drugs such as linezolide, clofazimine and later generation of quinolones for treatment of MDR-TB. These second-line drugs were reorganized into three groups based on their efficacy, safety and tolerability and arranged according to priority and preference, whereby group A (levofloxacin or moxifloxacin, bedaquiline, linezolid) are the most preferred choice followed by group B (clofazimine, cycloserine, terizidone) and other drugs in Group C. Injectable agents specifically kanamycin and capreomycin are no longer recommended when designing longer MDR-TB regimens. The effective treatment regimen is designed by taking into consideration on the available choices and number of drugs according to priority, the duration of intensive and continuation phases, and the role of injectable drugs as well as a patient-tailored clinical strategy focused on good adherence to achieve high treatment success rates. Properly selected MDR-TB patients have also been shown to benefit from surgery.

SYMPOSIUM 5

S5B – Tuberculosis

CHALLENGES IN DIAGNOSIS & MANAGEMENT OF SPINE TUBERCULOSIS

Fazir Mohamad
Kuala Lumpur Hospital, Kuala Lumpur, Malaysia

Spinal tuberculosis (STB) is a common form of extrapulmonary tuberculosis (TB), accounting for 50% of all musculoskeletal TB. The most common presentation is chronic back pain, for which the diagnosis of STB can be easily overlooked, leading to the development of neurological deficits and osseous deformities of the spine. Diagnosis of spinal tuberculosis in the early (inflammatory) stage is essential to prevent the development of spinal deformity and neurological deficit. The risk of TB is increasing as a result of multidrug-resistant TB strains. The first line of treatment is still antitubercular medical therapy until healing is attained, with surgical intervention being indicated for decompression of neurological elements that have been unresponsive to medical therapy, the restoration of spinal stability, and the correction of deformity. Early diagnosis and treatment improve the prognosis.

SYMPOSIUM 5

S5B – Tuberculosis

LATENT TB: PREVENT OR TREAT

Abdul Razak Abdul Muttalif
MAHSA University, Kuala Lumpur, Malaysia

Up to one third of the world's population is estimated to be infected with M. tuberculosis, called latent TB infection (LTBI). People with LTBI do not have symptoms, and they cannot spread TB bacteria to others. However, if latent TB bacteria become active in the body and multiply, the person will go from having LTBI to being sick with TB disease. On average, 5–10% of those infected will develop active TB disease over the course of their lives, usually within the first 5 years after initial infection. For this reason, people with LTBI should be treated to prevent them from developing TB disease. Prevention of active TB disease by treatment of LTBI is a critical component of the WHO End TB Strategy.

There is no gold standard method for diagnosing LTBI. Tuberculin skin test (TST, Mantoux) and interferon-gamma release assay (IGRA) require a competent immune response in order to identify people infected with TB and are imperfect tests for measuring progression to active disease. The comparison of TST and IGRA in the same population does not provide strong evidence that one test should be preferred over the other for predicting progression to active TB disease.

As preventive treatment adds risks and costs, preventive treatment of M. tuberculosis infection should be selectively targeted to the population groups at highest risk for progression to active TB disease, who would benefit most from treatment of LTBI.

Uncertainty in LTBI testing, the risk for development of active TB, possible side-effects of treatment and the protective benefits, are issues to consider in the prevention or treat in LTBI.

SYMPOSIUM 5

S5C – Chronic Cough in Children

CHRONIC COUGH IN CHILDREN, WHAT TO WORRY?

Eg Kah Peng
University Malaya Medical Centre, Kuala Lumpur, Malaysia

Chronic cough in children is defined as daily cough of more than 4 weeks of duration. It is a common cause for frequent medical consultations. Though majority of the chronic cough resolve without treatment, it has a negative impact on the quality of life of the children and their parents. Paediatric chronic cough may be due to a diverse range of aetiologies, including serious respiratory disorders. Post-infectious cough, asthma, protracted bacterial bronchitis, airway malacia and bronchiectasis are among the common causes of chronic cough in young children. However, by

adolescence, the aetiologies of cough are more likely to become those frequently encountered in adults, namely, asthma, upper airway cough syndrome and gastroesophageal reflux.

Although a wide range of diagnostic options exist, initial evaluation of chronic cough in children should rely heavily on a detailed history and thorough physical examination, with a focus on the identification of specific cough pointers such as recurrent pneumonia, feeding difficulties, failure to thrive, digital clubbing, chest wall deformity and abnormal auscultatory findings that may direct further investigations. Even in the absence of any concerning features on history and examination, a chest x-ray (CXR) and spirometry (for school age children) are appropriate initial investigations for most children presenting with chronic cough. An abnormal CXR is strongly suggestive of an underlying pathology and warrants further workup. Whereas a spirometry can be utilized to determine the presence and severity of respiratory obstruction or restriction as well as airway reversibility. Further investigations such as flexible bronchoscopy, chest CT scan and immunity tests should be considered when specific cough pointers are present. In the absence of specific cough pointers, the use of appropriate antibiotics improves resolution of chronic wet or productive cough. A trial of inhaled corticosteroid can be considered, particularly in children with a history of chronic dry cough and atopic sensitization.

A correct interpretation of the phenotype presentation of chronic cough in children is crucial as it can be translated into guidance for individualized workup and further assessment. A systematic approach based on the paediatric specific cough management protocols or algorithms will be helpful for adequate management and improvement of outcomes without the risk of inappropriate investigations or inadequate treatment.

SYMPOSIUM 5

S5C – Chronic Cough in Children

PROTRACTED BACTERIAL BRONCHITIS, IS IT REAL?

Ahmad Fadzil Abdullah

Hospital Pakar PRKMUIP, Pahang, Malaysia

Chronic cough children are one of the commonest complain presented to the health practitioner. Significant number of this cough is moist. Previously many of this case was identified as chronic bronchitis. It was in 2006 the term protracted bacterial bronchitis (PBB) was use in publication to differentiated it from other causes of cough especially bronchial asthma. Since then it was described as distinct clinical feature in many chronic cough pathways.

PBB definition were chronic wet cough over 4 weeks, response to 2 weeks course of antibiotic and exclusion of other causes (clinical) or bacterial growth in bronchial secretion (micro). The clinical definition can result in overdiagnosis of PBB and to get the culture in all patients is not practical. The other thing to consider is that many acute cough and other lower respiratory tract infection can also have prolong cough during recovery. Many of these conditions do not need any treatment as it resolves by itself.

The mainstay treatment of the PBB is prolong antibiotic for at least 2 weeks. It may need longer than that if the symptom persists. To start a prolong antibiotic without proper culture can be an issue but in PBB, the response to antibiotic is a diagnostic criterion. However, after 30 years, there are only 3 RCT that been publish to look into response to antibiotic. At the moment the optimum duration to treat the PBB still not being proven in RCT.

Thus, PBB may be entity of its own but more work needs to be done understand this disease and a high specific test that practical to use in clinical set up has to be develop.

SYMPOSIUM 5

S5C – Chronic Cough in Children

NON-CF BRONCHIECTASIS

Shangari Kunaseelan
Tunku Azizah Hospital, Kuala Lumpur, Malaysia

Non-CF bronchiectasis (NCFB) is an important cause of chronic suppurative lung disease in developing countries, like Malaysia. Diagnostic delay in children due to misdiagnosis is commonly seen and must be avoided, as NCFB is an important contributor to chronic respiratory morbidity.

Bronchiectasis is a state of dilatation of the cartilaginous airways manifested clinically by productive, wet cough with radiological evidence of bronchial dilatation on HRCT thorax.

The development of bronchiectasis occurs due to an environmental insult often on a background of impaired muco-ciliary clearance. The pathophysiology of bronchiectasis includes alterations in bronchial structure accompanied by neutrophilic inflammation, intra-luminal secretion accumulation and obliteration of the distal airways.

The common aetiologies of NCFB in Malaysia are post-infective, immunodeficiency and idiopathic. Other causes include congenital lung malformations or respiratory disorders, chronic inflammatory disorders, sequelae of aspiration or toxic inhalation, and mechanical bronchial obstruction.

There is lack of evidence-based consensus till today on the treatment of NCFB. The goal of management is to control symptoms, prevent progressive lung damage and to facilitate growth and development. Sputum culture is important in evaluating airway colonisation and acute infection. Therapeutic strategies include disease specific therapy, prompt antibiotics treatment during acute infections, long-term oral antibiotics (e.g. Azithromycin), nebulised hypertonic saline used with caution, chest physiotherapy and exercise, adequate nutrition and vaccinations. There is insufficient evidence to prescribe inhaled corticosteroids in paediatric NCFB.

Long term aim in childhood NCFB is towards cure of bronchiectasis and to reduce the high burden of this disease to the healthcare system.

SYMPOSIUM 8

S8A – COVID-19 Highlights

BIOLOGY OF SARS-COV2

Chan Yoke Fun
University Malaya, Kuala Lumpur, Malaysia

Coronavirus disease (COVID-19), caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), has caused more than 57 million infections and 1.4 million deaths globally. SARS-CoV-2 is from the family of *Coronaviridae* and genus betacoronavirus together with Coronavirus OC43, 229E, NL63, HKU1, MERS-CoV and SARS-CoV. HCoV-229E, NL63, HKU1 and OC43 usually have low pathogenicity and cause mild respiratory symptoms such as common cold. In contrast, SARS-CoV-2, SARS-CoV and MERS-CoV could lead to severe and potentially fatal pneumonia. In this talk, I will cover the virology, immunology and pathogenesis of SARS-CoV-2. I will highlight how this information is important and will support current preparedness and strategies to combat this pandemic COVID-19

SYMPOSIUM 8

S8B – Thoracic Radiology

RADIOLOGY RAPID FIRE – RADIOLOGY QUIZ

Dennis Tan Gan Pin
Loh Guan Lye Specialist Center, Pulau Pinang, Malaysia

In this thoracic imaging quiz session, 15 questions with chest radiographs and/or CT scan images will be presented. Short clinical history with multiple choices were given. Participants are encouraged to choose the best answer from multiple choices given. Answers will be given at the end of the quiz session, followed by discussion the cases.

SYMPOSIUM 9

S9A – COVID-19 Highlights

STRATEGIES FOR COVID-19 VACCINE

Rebecca Harris
Sanofi Pasteur, Singapore

COVID-19 is the first pandemic in modern history to severely challenge global health systems and the economy. Safe and effective preventive measures that allow return to normal life, such as vaccines, are urgently needed. However, COVID-19 is caused by SARS-CoV-2, a member of coronavirus family against which no human vaccines previously existed. Unprecedented global efforts are underway to develop vaccines using existing and novel technologies. Even in the context of accelerated vaccine development, safety remains the priority and must not be compromised. More than 200 candidates are under pre-clinical evaluation, and more than 50 in clinical trials, with several candidates now in late-stage trials. Sanofi Pasteur brings its commitment to the global efforts to fight COVID-19 with two different technologies. One is based on an mRNA vaccine technology in collaboration with Translate Bio. The second one leverages a well-established recombinant subunit vaccine technology and production capacity used for seasonal influenza vaccine, combined with the approved AS03 Adjuvant System, in collaboration with GSK. This presentation will discuss the status of COVID-19 vaccine development pipeline, an overview of vaccine approaches, and Sanofi Pasteur's approach to development of a COVID-19 vaccine.

SYMPOSIUM 9

S9A – COVID-19 Highlights

LONG TERM CARE IN POST COVID-19 PATIENTS

Syazatul Syakirin Sirol Aflah
Institut Perubatan Respiratori, Kuala Lumpur, Malaysia

The unprecedented pandemic caused by SAR-Cov-2 infection has resulted in millions of patients infected worldwide and the long term sequelae of COVID-19 on are not yet foreseeable. Emerging evidence suggests that COVID-19 adversely affects different systems in the human body. The clinical manifestation of SAR-Cov-2 infection ranging from asymptomatic carriage to severe organ dysfunction. While global health community are focusing on the various trials of COVID-19 vaccines and strategizing the acute treatment, the long term consequences of COVID-19 survivors is likewise important for evaluation. The number of recovered patients with persisting symptoms and unexpected sequelae is increasing and research is still required to determine the long-term effects of SARS-CoV-2. Long-term adverse outcomes have been reported with similar diseases from other coronaviruses, namely Middle East Respiratory Syndrome (MERS) and Severe Acute Respiratory Syndrome (SARS). The long term care is imperative for better understanding on the possible outcome of recovered COVID-19 patients and monitor any development to other

detrimental illnesses during longitudinal follow up. The follow up requires a comprehensive assessment by multi-disciplinary team according to the concerned aspect for detection and suitable management towards their physical, psychosocial and social realm.

SYMPOSIUM 9

S9B – Tuberculosis in Children

WHEN TO CONSIDER TB TREATMENT FAILURE

Rina Triasih
University of Gadjah Mada, Yogyakarta, Indonesia

Treatment outcome of tuberculosis in children are generally good, even in children who are at risk to develop severe form of tuberculosis, provided that the treatments are initiated soon. However, some children may experience treatment failure, which in a patient with bacteriologically confirmed is defined as persistence of positive sputum smear at 5 months or later after the initiation of anti tuberculosis treatment, or reversion to smear positive after initial negative sputum smear following anti tuberculosis treatment. In fact, due to the paucibacillary nature of tuberculosis in children, and the difficulty in collecting sputum, most diagnosis of tuberculosis in children are clinical diagnosis, which is based on triad of symptoms, evidence of tuberculosis infection (either close contact, positive tuberculin skin test or positive IGRA), and specific features on the chest radiography. For these children, treatment failure should be considered when there is lack or no response to 2-4 months adequate anti tuberculosis regimen with good adherence, as evidence by a persistence of symptoms, weight loss or no weight gain, and/or no change or worsening of the chest radiograph. There are some possible causes of the treatment failure, including the possibility of drug resistant tuberculosis and the presence of co-morbidities (such as HIV infection, severe malnutrition, and other immunocompromised conditions). The possibility of other diagnosis (not tuberculosis) should also be taken into account, considering that the symptoms of tuberculosis in children can also be found in other diseases.

SYMPOSIUM 9

S9B – Tuberculosis in Children

CONTACT TRACING AND LATENT TB INFECTION

Noor Ain Noor Affendi
Hospital Sultanah Nur Zahirah, Terengganu, Malaysia

Globally, an estimated 10.0 million people affected by Tuberculosis (TB) in 2019 and the numbers decline slowly in recent years. Children below 15 years old accounted for 12% of the people who developed TB. They are most often contract TB from infectious adult household contacts with active TB. Thus, contact tracing play an important role in identifying new TB cases.

Screening and management of child contacts has great potential to reduce TB-related morbidity and mortality. It may prevent progression from infection to disease by early initiation of preventive therapy. It also has the potential to increase case findings and reduce transmission.

TB Preventive Treatment (TPT) is one of the key components in WHO End TB Strategy. At-risk populations are identified and screened for TB disease before initiating TPT. The decision points center around determining HIV status, eliciting history of the household or other close contacts, other risk factors, eliciting suggestive signs and symptoms depending on the person's age, results of TST or IGRA and abnormality on chest radiography.

Isoniazid preventive treatment (IPT) for six months has been the most widely used regimen for LTBI. The other choice of TPT depends on availability of appropriate formulations and considerations for age, safety, drug–drug interactions and adherence.

SYMPOSIUM 9

S9B – Tuberculosis in Children

MULTI-DRUG RESISTANT TUBERCULOSIS

Nik Khairulddin Nik Yusoff

Hospital Raja Perempuan Zainab II, Kelantan, Malaysia

The World Health Organization estimates that 10 million new cases of tuberculosis (TB) occurred worldwide in 2018, of which 600,000 were rifampicin or multidrug-resistant TB (defined as M. tuberculosis with in vitro resistance to at least isoniazid and rifampin). Of this, an estimated 32,000 cases were in children less than 15 years.

Accurate diagnosis of MDR-TB in children is often challenging: bacterial confirmation is frequently missing as clinical samples are difficult to obtain and children usually have paucibacillary disease.

Treatment is difficult with longer duration of therapy in comparison to drug susceptible TB. Multiple second-line drugs, that are more toxic, are usually prescribed in the treatment regimen. Data on safety and efficacy in children of new and repurposed TB drugs are still lacking. Despite these challenges, children who received treatment, generally have outcomes that are better than adults with MDR-TB.

ORAL PRESENTATIONS

OP 1 CLINICAL OUTCOME AND TRANSMISSION RISK OF ASYMPTOMATIC CORONAVIRUS DISEASE 2019 (COVID-19) PATIENTS

Yen Shen Wong. Dzawani Muhamad, Soon Hin How, Mohamed Sapian Mohamed, Nasrah Mohd Arif, Tze Vee Soh, Suzana Mohd Hashm, Norazmi Abdullah

Pekan Hopital, Pahang, Malaysia

OP 2 FINANCIAL IMPACT OF SWITCHING COPD PATIENTS FROM ICS/LABA TO INDACATEROL/GLYCOPYRRONIUM BREEZHALER IN PUBLIC SECTOR OF MALAYSIA: A BUDGET IMPACT ANALYSIS

Kapse Sandip[1], Irfhan Ali Bin Hyder Ali[2], Syazatul Syakirin[3], Zaria Mona[4], Syed Salleh[1]

[1]*Novartis Corporation (Malaysia) Sdn. Bhd. Petaling Jaya, Malaysia*

[2]*Hospital Pulau Pinang, Penang, Malaysia*

[3]*Institut Perubatan Respiratori, Kuala Lumpur, Malaysia*

[4]*Hospital Serdang, Kajang, Malaysia*

OP 3 IMPACT OF INFANT RESPIRATORY TRACT MICROBIOME ON THE RESPIRATORY MORBIDITY OF THEIR INFANTS: A PROSPECTIVE STUDY

Kai Ning Chong[1], Anna Marie Nathan[1], Rafdzah Ahmad Zaki[1], Kah Peng Eg[1], Cindy Shuan Ju Teh[1], Nuguelis Razali[1], Hng Shih Ying [1], Jessie Anne de Bruyne[1]

[1]*University of Malaya, Kuala Lumpur, Malaysia*

[2]*University Malaya Medical Centre, Kuala Lumpur, Malaysia.*

OP 4 ULTRASOUND GUIDED TRANSTHORACIC NEEDLE BIOPSY: A PHYSICIAN PERSPECTIVE

Dr Nagarani N., Dr Aishah I., Dr Megat Razeem AR.

Hospital Tengku Ampuan Afzan, Kuantan Pahang

OP 5 IMPACT OF MATERNAL DIET DURING PREGNANCY ON RESPIRATORY MORBIDITY OF THEIR INFANTS: A PROSPECTIVE STUDY

Kai Ning Chong[1], Anna Marie Nathan[1], Rafdzah Ahmad Zaki[1], Siti Hawa Mohd Taib[2], Hazreen Abdul Majid[2], Ai Kah Ng [1,2], Kah Peng Eg[1], Cindy Shuan Ju Teh[1], Nuguelis Razali[1], Jessie Anne de Bruyne[1]

[1]*University of Malaya, Kuala Lumpur, Malaysia*

[2]*University Malaya Medical Centre, Kuala Lumpur, Malaysia.*

OP1

CLINICAL OUTCOME AND TRANSMISSION RISK OF ASYMPTOMATIC CORONAVIRUS DISEASE 2019 (COVID-19) PATIENTS

Yen Shen Wong. *Dzawani Muhamad, Soon Hin How, Mohamed Sapian Mohamed, Nasrah Mohd Arif, Tze Vee Soh, Suzana Mohd Hashm, Norazmi Abdullah.*

Pekan Hopital, Pahang, Malaysia

Introduction:

Coronavirus disease 2019 (COVID-19) is highly contagious in symptomatic patients as it is thought to be transmitted through respiratory droplets. However, it is debatable whether asymptomatic COVID-19 patients are contagious due to lack of data.

Objectives:

This study aims to evaluate outcome of asymptomatic COVID-19 patients and identify the risk of transmission.

Methodology:

From 1st March to 15th April 2020, a total of 247 COVID-19 cases were admitted to Tengku Ampuan Afzan Hospital and 1010 close contacts were identified. We studied the epidemiological and clinical outcomes in asymptomatic subjects, as well as estimated the metrics of disease transmission between asymptomatic, symptomatic, and pneumonia subjects.

Results:

From a total of 125 asymptomatic subjects, majority (n=116, 92.8%) remained asymptomatic upon discharge. Only 9 (7.2%) subjects developed mild symptoms after admission. Seven subjects had abnormal chest radiograph suggestive of pneumonia, and 22 subjects (17.6%) were found to have mild liver impairment. None of the asymptomatic subjects required oxygen support, inotropic support or ICU care during admission. Fifteen second generation COVID-19 cases were found transmitted from the asymptomatic group, with an attack rate of 3.9%, which was statistically significantly lower compared to the symptomatic (7.6%) or pneumonia groups (25.7%, $p<0.001$).

Conclusions:

Asymptomatic COVID-19 patients show excellent clinical outcome and had a lower transmission risk compared with symptomatic or pneumonia patients. However, the existence of transmission from asymptomatic individuals raises the alarm of prompt public health measures such as comprehensive contact tracing and strict isolation to prevent further spread of the disease.

OP2

FINANCIAL IMPACT OF SWITCHING COPD PATIENTS FROM ICS/LABA TO INDACATEROL/GLYCOPYRRONIUM BREEZHALER IN PUBLIC SECTOR OF MALAYSIA: A BUDGET IMPACT ANALYSIS

Kapse Sandip[1], Irfhan Ali Bin Hyder Ali[2], Syazatul Syakirin[3], Zaria Mona[4], Syed Salleh[1]

[1]*Novartis Corporation (Malaysia) Sdn. Bhd. Petaling Jaya, Malaysia*

[2]*Hospital Pulau Pinang, Penang, Malaysia*

[3]*Institut Perubatan Respiratori, Kuala Lumpur, Malaysia*

[4]*Hospital Serdang, Kajang, Malaysia*

Introduction: Chronic obstructive pulmonary disease (COPD) affects almost 5% of the Malaysian population and imposes a significant burden on healthcare utilization due to exacerbations and symptom onsets.

Objective: We aimed to estimate the 5-year budget impact of government spending with the inclusion of Ultibro in the national formulary. Patients may switch from corticosteroid+long acting beta-agonists (ICS+LABA) regimen to indacaterol/glycopyrronium by 10% yearly for patients treated with COPD in the Malaysian public healthcare system.

Methodology: A budget impact model was developed, comprising of moderate-to-very severe COPD. The perspective of Malaysia healthcare payer used, with direct cost inputs for drugs, adverse events (e.g. pneumonia) and exacerbations was applied according to the Malaysia clinical practice. Data from clinical trials (e.g. FLAME) and in consultations with physicians were used to populate the model.

Results: 73,437 patients estimated to be on treatment with long acting bronchodilators or combination therapy in the first year (2020), whilst a 3% annual increase in remaining years. The current practice incurred a direct medical cost of RM 711.4 mil over 5 years. Meanwhile, shifting to indacaterol/glycopyrronium projected an increase in medical cost by RM10.2 mil (1.43%); mainly due to the increase in drug expenditure of over RM17.5 mil (5.12%). However, such increase in expenditure will, in turn, yield estimated cumulative savings of RM7.3 mil (4.72%), contributed from the reduction in the cost of exacerbations (RM4.9 mil, 1.67%) and adverse events (RM2.4 mil, 3.05%). The direct medical cost of switching to indacaterol/glycopyrronium in year 1 forecasted at RM151.89 per patient per month, while RM154.38 in year 5.

Conclusion: Shift in treatment approach from ICS+LABA to indacaterol/glycopyrronium was clinically favorable with exacerbations and adverse event reductions by partially offsetting the increase in drug costs. These clinical benefits were received at a minor increase of 1.43% of total direct costs over 5 years.

OP3

IMPACT OF INFANT RESPIRATORY TRACT MICROBIOME ON THE RESPIRATORY MORBIDITY OF THEIR INFANTS: A PROSPECTIVE STUDY

Kai Ning Chong[1], Anna Marie Nathan[1], Rafdzah Ahmad Zaki[1], Kah Peng Eg[1], Cindy Shuan Ju Teh[1], Nuguelis Razali[1], Hng Shih Ying [1], Jessie Anne de Bruyne[1]

[1]*University of Malaya, Kuala Lumpur, Malaysia*

[2]*University Malaya Medical Centre, Kuala Lumpur, Malaysia*.

Introduction: Respiratory tract microbiome of newborn infants may influence future development of respiratory tract disease.

Objectives: To determine the a) infant respiratory tract microbiome at birth, b) risk factors associated with microbiome colonisation and c) association between microbiome colonisation and risk for respiratory symptoms among infants in the first 6 months of life.

Methodology: This prospective study recruited healthy newborn infants in the postnatal ward. Premature infants and infants with significant perinatal illness were excluded. Nasal swab were performed within 72hrs of delivery. Samples were analysed via polymerase chain reacion (PCR) for *Streptococcus pneumoniae, Staphylococcus aureus, Haemophilus influenzae* and *Moraxella cattarhalis.* Respiratory morbidity was assessed at 1, 3 and 6 months old.

Results: Three hundred healthy infants were recruited. Two-thirds (67.7%) were delivered via spontaneous vertex delivery. Bacteria were detected in 43.3% (n=130) infants of which *Streptococcus pneumoniae* (77.7%, n=101) was the commonest. *Haemophilus influenzae* and *Moraxella cattarhalis* were not detected. At 6 months old, 59.8% (n=116/194) of infants who responded to the online form, had experienced respiratory symptoms. Wheezing illness was seen in 15% (n=30/194) of infants. Maternal URTI during pregnancy was associated with colonisation of *Strep. pneumoniae* (RR 1.64, p = 0.004). Colonization with *Staph. aureus* was associated with increased risk of respiratory symptoms among infants at six months of age (RR 1.45, p = .013). Colonization with *Strep. pneumoniae* was associated with a lower risk of respiratory symptoms among infants at three (RR 0.72, p = .023) and six months of age (RR 0.58, p = < 0.001).

Conclusion: Colonisation of the newborn respiratory tract occurred in 43% of infants with *Streptococcus pneumoniae* being the commonest and this was associated with reduced risk for respiratory symptoms, in the first 6 months of life.

OP4

ULTRASOUND GUIDED TRANSTHORACIC NEEDLE BIOPSY: A PHYSICIAN PERSPECTIVE

Dr Nagarani N., Dr Aishah I., Dr Megat Razeem AR.
Hospital Tengku Ampuan Afzan, Kuantan Pahang

Introduction: Lung and mediastinal masses are common referral to pulmonologist. Patients would normally be subjected to CT guided biopsy by radiologist if these lesions are peripherally located or abutting the pleura. Ultrasound guided biopsy however now gaining its popularity as its yield has a comparable diagnostic accuracy with less complication compared to CT guided biopsy.

Objective: To assess the mass approachable by ultrasound and the efficacy and safety of the ultrasound guided biopsy done by pulmonologist.

Methodology: Ultrasound guided biopsy done for patient referred to pulmonologist for lung mass from July 2019 to September 2020. Patients with peripheral lung mass, mediastinal mass or mass abutting the pleura were planned for the procedure. Informed consent and pre procedural baseline Full blood count and coagulation profile were done. Antiplatelet and anticoagulant were withheld. Transthoracic ultrasounds were done, and area was marked. Biopsy done with core biopsy needle and sampled 2 to 4 times under aseptic technique. Immediate and delayed complications were observed. Post procedure chest X-ray was done for each patient.

Results: Total 44 patients subjected to ultrasound guided transthoracic biopsy. Patient's age ranging from 16 to 82 years old. 17 patients had mediastinal mass where the rest had lung mass. Adequate sample for histology evaluation is 95% (42/44). Yield for malignancy is 92.8% (39/42). Minimal complication observed. 1 patient had bleeding from the biopsy site which secured with adrenaline pack. No pneumothorax or death observed.

Conclusion: Ultrasound guided biopsy performed by trained physician is safe and has excellent yield. It expedites patient's diagnosis by cutting down the waiting time for radiologist performed percutaneous lung/ mediastinal mass biopsy.

OP5

IMPACT OF MATERNAL DIET DURING PREGNANCY ON RESPIRATORY MORBIDITY OF THEIR INFANTS: A PROSPECTIVE STUDY

Kai Ning Chong[1], Anna Marie Nathan[1] , Rafdzah Ahmad Zaki[1], Siti Hawa Mohd Taib[2], Hazreen Abdul Majid[2], Ai Kah Ng [1,2], Kah Peng Eg[1], Cindy Shuan Ju Teh[1], Nuguelis Razali[1], Jessie Anne de Bruyne[1]

[1]*University of Malaya, Kuala Lumpur, Malaysia*

[2]*University Malaya Medical Centre, Kuala Lumpur, Malaysia.*

Introduction: Maternal food choices during pregnancy impact infant health.

Objectives: The study aim was to determine the association between maternal diet during pregnancy and respiratory morbidity of infants during the first 6 months of age.

Methodology: This prospective cohort study included healthy mother-infant pairs during their postnatal period. A language appropriate validated food frequency questionnaire was used to determine the maternal diet during the last trimester. Respiratory morbidity of infants at 1-, 3- and 6-months-old was obtained via an online form.

Results: Three hundred mother-baby pairs were recruited over eleven months. Increased maternal consumption of milk and dairy products during pregnancy was associated with reduced risk of respiratory symptoms i.e. cough, runny nose, wheezing and shortness of breath among infants up to 1-month (RR 0.34, 95% CI: 0.13, 0.88) and 3 months of age (RR 0.60, 95% CI: 0.37, 0.98). Increased consumption of nuts and legume products was also protective against the incidence of respiratory symptoms up to 1-month-old (p = 0.008). Conversely, increased confectionery intake during pregnancy was associated with unscheduled doctor visits in the first month (p = 0.023) and at 3 months of age (p = 0.003). Higher intake of fats and oil was also associated with an increased incidence of respiratory symptoms at 6-months-old (p = 0.010).

Conclusion: Higher maternal consumption of milk and nuts during pregnancy may reduce respiratory morbidity while increased consumption of fats, oil, and confectionery items may increase the respiratory morbidity in their infants.

POSTER PRESENTATIONS

PP 1 PERFORMANCE OF GLOBAL SUSPECTED COVID-19 CASE DEFINITION WITH PLAIN CHEST RADIOGRAPHY: A STUDY OF CLUSTER AND INDIVIDUAL TRANSMISSION

Sze Shyang KHO[1a,6a], Aida Abdul AZIZ[2b], Tonnii Loong Loong SIA[1b], Hema Yamini A/P RAMARMUTY[3a], Syazatul Syakirin SIROL AFLAH[4a], Hock Hin CHUA[1b], Sujal DESAI[6b], Anand DEVARAJ[6b], Yasmin Mohamed GANI[2a], Pik Pin GOH[5], Hee Kheen HO[3b], Nai Chien HUAN[3a], Fatimah Hartinah bt HUSIN[3c], Izyan bt ISMAIL[4c], Jason Henn Leong KONG[3b], Kiew Siong LAU[1c], Heng Gee LEE[3b], Chee Loon LEONG[4b], Siow Leng Shireen LUI[3b], Siti Rohani bt MOHD YAKOP[4c], Jee Yan ONG[1d], Mohan PATHMANATHAN[5], Yen Tsen SAW[3b], Siew Teck TIE[1a], Teck Fung WONG[1d], Mei Ching YONG[1a], Zuhanis bt ABDUL HAMID[4c], Felix CHUA[6a]

[1]Hospital Umum Sarawak, Ministry of Health Malaysia, Kuching, Sarawak, Malaysia
- [a] Division of Respiratory Medicine, Department of Medicine
- [b] Division of Infectious Disease, Department of Medicine
- [c] Department of Diagnostic Imaging
- [d] Sarawak General Hospital COVID-19 Task Force

[2]Hospital Sungai Buloh, Ministry of Health Malaysia, Selangor, Malaysia
- [a] Department of Infectious Disease
- [b] Department of Diagnostic Imaging

[3]Hospital Queen Elizabeth, Ministry of Health Malaysia, Kota Kinabalu, Sabah, Malaysia
- [a] Department of Respiratory Medicine
- [b] Deparment of Infectious Disease
- [c] Department of Diagnostic Imaging

[4]Hospital Kuala Lumpur, Ministry of Health Malaysia, Kuala Lumpur, Malaysia
- [a] Institute Perubatan Respiratori
- [b] Department of Infectious Disease
- [c] Department of Diagnostic Imaging

[5]Institute for Clinical Research, National Institutes of Health, Ministry of Health Malaysia, Selangor, Malaysia

[6]The Royal Brompton Hospital, Royal Brompton & Harefield NHS Foundation Trust, London, United Kingdom
- [a] Department of Respiratory Medicine (Interstitial Lung Disease)
- [b] Department of Thoracic Radiology

PP 2 INTRAPLEURAL FIBRINOLYTICS IN CHILDREN WITH COMPLICATED PNEUMONIA WITH PARAPNEUMONIC EFFUSION: A 5-YEAR REVIEW IN HOSPITAL TENGKU AMPUAN RAHIMAH, KLANG

Canace Teoh, See Teng Ng, Siew Choo Su

Hospital Tengku Ampuan Rahimah, Klang, Malaysia

PP 3 IN-VITRO ANTIMICROBIAL SUSCEPTIBILITY PATTERN OF COMMON RESPIRATORY PATHOGENS IN A PRIVATE HEALTHCARE SETTING: COMPARISON OF MOXIFLOXACIN WITH OTHER ANTIMICROBIAL AGENTS

S W Fong[1], Y L Low[2], A Adnan[3]

[1,2]Pantai Premier Pathology Sdn Bhd, Kuala Lumpur Malaysia

[3]Universiti Teknologi MARA, Sungai Buloh, Malaysia

PP 4 RADIOLOGICAL PROGRESSION IN SEVERE COVID-19 SURVIVORS

Ka Kiat Chin, Yong Kek Pang, Chong Kin Liam, Chee Kuan Wong, Mau Ern Poh, Jiunn Liang Tan, Thian Chee Loh, Vijayan Munusamy, NurHusna Ibrahim.

Department of Medicine, Faculty of Medicine, University of Malaya, Kuala Lumpur, Malaysia

PP 5 AN AUDIT ON THE MANAGEMENT OF ACUTE PULMONARY EMBOLISM IN UNIVERSITY OF MALAYA MEDICAL CENTRE (UMMC)

Ka Kiat Chin, Chee Kuan Wong, Nur Husna Ibrahim.

Department of Medicine, Faculty of Medicine, University of Malaya, Kuala Lumpur, Malaysia

PP 6 ADVERSE DRUG REACTIONS TO NINTEDANIB AND PIRFENIDONE REPORTED IN IDIOPATHIC PULMONARY FIBROSIS PATIENTS IN INSTITUTE OF RESPIRATORY MEDICINE

Ming-Yi Khoo, Syazatul Syakirin Sirol Aflah, **Suet Yin Tan**, Zulsairi Mohd Pauzi

Institute of Respiratory Medicine, Kuala Lumpur, Malaysia

PP 7 EFFECT OF MOVEMENT CONTROL ORDER (MCO) IN MALAYSIA TO HOSPITAL ADMISSION FOR RESPIRATORY TRACT INFECTION IN A TERTIARY HOSPITAL

Fauziah Ripin@Mat Nor[1], **SzeChiang Lui[1],** Maria Kamal[1], Nanthiny Mahalingam[1], Dk Nurshahidah Nafesah Abd Adzim[1], Asiah Kassim[1,2]

1. *Clinical Research Centre (CRC), Hospital Tunku Azizah, Kuala Lumpur, Malaysia*
2. *Department of Paediatric, Hospital Tunku Azizah, Kuala Lumpur, Malaysia*

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Fauziah Ripin@Mat Nor[1], Lui Sze Chiang[1], **Maria Kamal[1],** N. Fafwati Faridatul Akmar[2]. Shangari Kunaseelan[2], Asiah Kassim [1,2]

1. *Clinical Research Centre (CRC), Hospital Tunku Azizah, Kuala Lumpur, Malaysia*
2. *Respiratory unit, Paediatric Department, Hospital Tunku Azizah Kuala Lumpur*

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Shangari Kunaseelan[1,2], Majid Al-Jabri[2], Daniel Goh[2,3], Michael Lim[2,3], Mahesh Ramamurthy[2,3]
[1]Hospital Tunku Azizah, Kuala Lumpur, Malaysia
[2]Khoo Teck Puat – National University Children's Medical Institute, National University Health System, Singapore
[3]Department of Paediatrics, Yong Loo Lin School of Medicine, National University of Singapore

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Hafizah Zainuddin[1], Noor Ain Affendi[2], N. Fafwati[3], Asiah Kassim[3]
[1.]Department of Paediatric, Universiti Tekonologi MARA, Selangor, Malaysia.
[2.]Department of Paediatric, Hospital Sultanah Nur Zahirah, Terengganu, Malaysia
[3] Paediatric Repiratory Unit, Hospital Tunku Azizah, Kuala Lumpur, Malaysia

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Hemelamariae Munusamy, Belinda Pek Yee Chin, Raymond Ee Chong Wong**,** Siew Choo Su
Department of Paediatrics, Hospital Tengku Ampuan Rahimah, Klang, Malaysia

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Sook Ling Low
University Malaya Medical Centre, Kuala Lumpur, Malaysia

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Nor Diyana Ismail, *Chua Siew Sing, Lai Fong Chiao, Noraini Ab Rahman*
Hospital Sultan Ismail Petra, Kuala Krai Kelantan

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Jeeva Janani Kuppusamy
Hospital Duchess of Kent, Sandakan, Sabah

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Syazatul Syakirin[1], Prethivan Pillai[2], Norni Natrah[1] Mohd Syahin[1]
Institut Perubatan Respiratori[1], Hospital Kuala Lumpur, Malaysia[2]

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Syazatul Syakirin[1], Norni Natrah[1,] Mohd Syahin[1]
Institut Perubatan Respiratori, Kuala Lumpur, Malaysia[1]

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Li Ying Soo[1], Chiong Hung Kiew[1], Alison Yih-Hua Ting[1, 2]
[1] Sarawak General Hospital, Kuching, Sarawak
[2] Timberland Medical Centre, Kuching, Sarawak

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Li Ying Soo[1], Chiong Hung Kiew[1], Alison Yih-Hua Ting[1, 2]
[1] Sarawak General Hospital, Kuching, Sarawak
[2] Timberland Medical Centre, Kuching, Sarawak

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Tan Ee Lin
Hospital Duchess of Kent, Sandakan, Sabah

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Sin Nee Tan[1], Aishah Ibrahim[1], Megat Razeem Abdul Razak[1], Muhammad Naimmuddin Abdul Azih[2], Norra Harun[1] Jamaluddin AR[2], Soon Hin How[2]
1. Hospital Tengku Ampuan Afzan Kuantan, Pahang, Malaysia
2. International Islamic University Malaysia Kuantan, Pahang, Malaysia

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MF Abu Samah, NH Mohd Aminudin, S Che Sayuti, A Omar, MZ Mat Jaeb
Medical Department Hospital Raja Perempuan Zainab II, Kota Bharu, Malaysia

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Hasliza A Razak, Emieliyuza Yusnita Alias, Mohd Nizam Mat Bah
Hospital Sultanah Aminah Johor Bahru, Johor Bahru, Johor

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Dr Aisya Natasya Musa, Dr Anas Mat Asis, Prof Dr Sazzli Shahlan Kasim, Assoc. Prof. Dr Ahmad Izuanuddin Ismail
Faculty of Medicine Sungai Buloh, Universiti Teknologi MARA (UiTM), Selangor, Malaysia

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***LC Tan**, SS Chua, Hasdalina Ishak, Nor Diyana Ismail, FC Lai, Noraini AR*

Hospital Sultan Ismail Petra (HSIP), Kelantan

PP 25 EFFICACY AND SAFETY PROFILES OF INTRAPLEURAL STREPTOKINASE IN NON-MALIGNANT COMPLEX PLEURAL EFFUSION IN MALAYSIAN SETTING

Muhammad Amin Ibrahim[1], Aisya Natasya Musa[1], Syahrinnaquiah Samsuddin[1], Nur Malina Mat Reffien[1], Mohd Arif Mohd Zim[1]

Faculty of Medicine Sungai Buloh, Universiti Teknologi MARA (UiTM), Selangor, Malaysia

PP1

PERFORMANCE OF GLOBAL SUSPECTED COVID-19 CASE DEFINITION WITH PLAIN CHEST RADIOGRAPHY: A STUDY OF CLUSTER AND INDIVIDUAL TRANSMISSION

Sze Shyang KHO[1a,6a], Aida Abdul AZIZ[2b], Tonnii Loong Loong SIA[1b], Hema Yamini A/P RAMARMUTY[3a], Syazatul Syakirin SIROL AFLAH[4a], Hock Hin CHUA[1b], Sujal DESAI[6b], Anand DEVARAJ[6b], Yasmin Mohamed GANI[2a], Pik Pin GOH[5], Hee Kheen HO[3b], Nai Chien HUAN[3a], Fatimah Hartinah bt HUSIN[3c], Izyan bt ISMAIL[4c], Jason Henn Leong KONG[3b], Kiew Siong LAU[1c], Heng Gee LEE[3b], Chee Loon LEONG[4b], Siow Leng Shireen LUI[3b], Siti Rohani bt MOHD YAKOP[4c], Jee Yan ONG[1d], Mohan PATHMANATHAN[5], Yen Tsen SAW[3b], Siew Teck TIE[1a], Teck Fung WONG[1d], Mei Ching YONG[1a], Zuhanis bt ABDUL HAMID[4c], Felix CHUA[6a]

[1]Hospital Umum Sarawak, Ministry of Health Malaysia, Kuching, Sarawak, Malaysia
[a] Division of Respiratory Medicine, Department of Medicine
[b] Division of Infectious Disease, Department of Medicine
[c] Department of Diagnostic Imaging
[d] Sarawak General Hospital COVID-19 Task Force
[2]Hospital Sungai Buloh, Ministry of Health Malaysia, Selangor, Malaysia
[a] Department of Infectious Disease
[b] Department of Diagnostic Imaging
[3]Hospital Queen Elizabeth, Ministry of Health Malaysia, Kota Kinabalu, Sabah, Malaysia
[a] Department of Respiratory Medicine
[b] Deparment of Infectious Disease
[c] Department of Diagnostic Imaging
[4]Hospital Kuala Lumpur, Ministry of Health Malaysia, Kuala Lumpur, Malaysia
[a] Institute Perubatan Respiratori
[b] Department of Infectious Disease
[c] Department of Diagnostic Imaging
[5]Institute for Clinical Research, National Institutes of Health, Ministry of Health Malaysia, Selangor, Malaysia
[6]The Royal Brompton Hospital, Royal Brompton & Harefield NHS Foundation Trust, London, United Kingdom
[a] Department of Respiratory Medicine (Interstitial Lung Disease)
[b] Department of Thoracic Radiology

Background Cluster outbreaks of COVID-19 have contributed significantly to the transmission of SARS-CoV-2 infection in Malaysia. Although widely used, the performance of the World Health Organization (WHO) case definition for suspected COVID-19 in cluster-dominant environments has not hitherto been reported.

Methods All suspected cases of COVID-19 presenting to four hospitals from 1st April to 31st May 2020 were included. Positive SARS-CoV-2 rRT-PCR was used as the diagnostic reference.

Results 540 patients were recruited during the study period. 321 (59.4%) patients tested positive for SARS-CoV-2 rRT-PCR with the majority (93.1%) identified through cluster tracing. Patients with COVID-19 were significantly younger [34 (IQR 26-50) vs. 52 (IQR 32-66)], had significantly fewer comorbidities (21.8% vs. 57.5%) and were less likely to be symptomatic (38% vs. 85.8%) than those with an alternative diagnosis. The mortality rate was also lower in the positive group (0.6% vs. 5.5%). A third of all chest radiographs in patients with COVID-19-positive cases were abnormal with an overall predilection of consolidation, ground-glass opacities or both for the peripheral lower zones. The WHO suspected case definition for COVID-19 accurately classified 35.4% of all patients, a rate not improved by the addition of baseline radiographic data.

Conclusion The bulk of COVID-19 cases in Malaysia, identified by tracing community cluster outbreaks, have been associated with low mortality. The global case definition for suspected SARS-CoV-2 infection performed poorly in this setting, a finding that has implications for future spikes of the disease in countries with similar transmission characteristics.

PP2

INTRAPLEURAL FIBRINOLYTICS IN CHILDREN WITH COMPLICATED PNEUMONIA WITH PARAPNEUMONIC EFFUSION: A 5-YEAR REVIEW IN HOSPITAL TENGKU AMPUAN RAHIMAH, KLANG

Canace Teoh, *See Teng Ng, Siew Choo Su*
Hospital Tengku Ampuan Rahimah, Klang, Malaysia

Introduction

Complicated pneumonia with parapneumonic effusion (PE) remains a significant cause of morbidity in the paediatric population affecting 3.3 per 100,000 worldwide. Treatment modalities include high dose antibiotics with chest tube drainage with intrapleural (IP) fibrinolytics or early surgery (video-assisted thoracoscopy or open thoracotomy).

Objectives

To study the demographics, clinical features, aetiologic agents, clinical outcomes and complications of IP fibrinolytics in paediatric patients with PE in our centre.

Methodology

A retrospective review of medical records between 1st January 2015 to 30th September 2020 for all paediatric patients with PE requiring chest drainage and IP fibrinolytics.

Results

There were 28 patients with PE during the study period. Of these, 19 patients (70.3%) required chest drainage and IP fibrinolytics. Median age of presentation was 2.3 years old (IQR 1.5-4.9). The male to female ratio was 3:1. Majority were Malays (73.6%), followed by others (15.8%), Chinese (5.2%) and Indians (5.2%). Clinical presentations were fever (100%), cough (94%), tachypnoea (32%), lethargy (25%), chest pain (12%) and abdominal pain (12%). Common aetiologic agents were Streptococcus Pneumoniae (50%), followed by Staphylococcus Aureus (27.8%), Mycoplasma Pneumoniae (11.1%), Acinetobacter (5.6%) and no identifiable organism (5.6%). Median duration of hospitalization was 18 days (IQR 15-26). Median duration of chest drainage was 9 days (IQR 6-15). IP fibrinolytics used were Urokinase (89%) and Streptokinase (11%). Median doses of IP agents given was 4 doses (IQR 2-9). Although 1 (0.05%) patient was referred for surgical intervention in view of unresolving fever, he did not require surgery and was continued on medical management at the referral centre. There were 9 out of 19 patients (47%) who developed localized intrapleural bleeding with no complication of systemic bleeding. There was no mortality in this study.

Conclusion

In developing countries where cardiothoracic services are limited, use of antibiotics in conjunction with chest drainage and IP fibrinolytics is an effective and safe treatment modality in paediatric patients with PE.

PP3

IN-VITRO ANTIMICROBIAL SUSCEPTIBILITY PATTERN OF COMMON RESPIRATORY PATHOGENS IN A PRIVATE HEALTHCARE SETTING: COMPARISON OF MOXIFLOXACIN WITH OTHER ANTIMICROBIAL AGENTS

S W Fong[1], Y L Low[2], A Adnan[3]

[1,2]Pantai Premier Pathology Sdn Bhd, Kuala Lumpur Malaysia

[3]Universiti Teknologi MARA, Sungai Buloh, Malaysia

Moxifloxacin is not widely used in hospitals in Malaysia and to the best of our knowledge, little is known about its *in vitro* activity in Malaysia. There has been no comparative study between moxifloxacin and other antibiotics especially against the respiratory pathogens which the drug is mainly intended for use. The objective of this study is to compare the *in vitro* activity of moxifloxacin to comparator agents against respiratory pathogens commonly isolated in the hospital setting. The minimum inhibitory concentration (MIC) of the antibiotics were determined for four common pathogens i.e., *Streptococcus pneumoniae*, *Haemophilus influenzae*, *Moraxella catarrhalis and Klebsiella pneumoniae.* A total of 100 isolates were tested during a one-year study period. Moxifloxacin showed excellent activity (96-100%) against *Streptococcus pneumoniae, Haemophilus influenzae and Moraxella catarrhalis* as well as good activity (80%) against *Klebsiella pnuemoniae*.

PP4

RADIOLOGICAL PROGRESSION IN SEVERE COVID-19 SURVIVORS

Ka Kiat Chin, Yong Kek Pang, Chong Kin Liam, Chee Kuan Wong, Mau Ern Poh, Jiunn Liang Tan, Thian Chee Loh, Vijayan Munusamy, NurHusna Ibrahim.

Department of Medicine, Faculty of Medicine, University of Malaya, Kuala Lumpur, Malaysia

Introduction

Long-term respiratory complications on severe COVID-19 patients are not well understood. About 19% of patients with COVID-19 were reported in severe or critical categories.

Objective

We aimed to evaluate the radiological progression and lung function of severe COVID-19 survivors on follow-up.

Methodology

A total of seven patients admitted to University Malaya Medical Centre with confirmed COVID-19 (positive PCR for SARS-CoV-2) in the severe category were evaluated. Chest radiographs obtained at presentation, during hospitalization and post-discharge follow-up were used in the assessment. A score of 0-4 was assigned to each lung according to the extent of involvement by consolidation or ground glass opacity (GGO). Based on the total score of both lungs, the patient's disease was categorized as mild (0-2), moderate (3-5) or severe (6-8).

Results

The median age of the seven patients was 66 years (range, 49-73). All patients had at least one comorbidity. Four patients (57.1%) were categorised into the critical disease with ARDS and 3 patients (42.9%) had severe pneumonia. Three patients required mechanical ventilation. Six patients received tocilizumab. All patients had abnormal chest radiograph at presentation. The main findings on chest radiograph were consolidation and GGO. The radiographs of all patients progressed to the severe category in a median of 5 days (range,1-10). Two patients had residual interstitial opacities (total score of 1 and 2, respectively) on follow up chest radiographs. The forced vital capacity of both patients was >80% of predicted values.

Conclusions

Post-infection lung fibrosis could be an emerging complication in severe COVID-19 patients. Larger sample size is required to shed more insight on this complication.

PP5

AN AUDIT ON THE MANAGEMENT OF ACUTE PULMONARY EMBOLISM IN UNIVERSITY OF MALAYA MEDICAL CENTRE (UMMC)

Ka Kiat Chin, Chee Kuan Wong, Nur Husna Ibrahim.
Department of Medicine, Faculty of Medicine, University of Malaya, Kuala Lumpur, Malaysia

Introduction

Pulmonary embolism (PE) is a common and potentially fatal disease. Reperfusion therapy is recommended in patients with high risk of early mortality.

Objective

To evaluate the clinical characteristics, management and outcomes of acute PE in local setting.

Methodology

This is a retrospective study looking at patients with acute PE from 1 June 2017 to 31 May 2020 who were admitted to the Respiratory ward, UMMC.

Results

A total of thirty-three patients (Male: Female 1:1) with the median age of 60 years (range, 29-91) were evaluated. Twenty-seven patients (81.8%) had at least one comorbidity. Prolonged immobilization and malignancy were common risk factors at presentation. Nine patients do not have any identifiable risk factor. Half of the patients were categorized into PE severity Index (PESI) Group III-V, with twelve patients (36%) had right ventricular dysfunction and six patients (18.2%) had haemodynamic instability at presentation. All patients were treated with anticoagulants except one required IVC filter. The median time of presentation to anticoagulation administration was 2 hours (IQR 1.5-5). Six patients received reperfusion therapy. Four patients had systemic thrombolysis and two patients had catheter directed thrombolysis. Only one patient had major bleeding post reperfusion. The overall median length of hospital stay was 6 days (IQR 4-10) with 30-day PE related mortality of 15% (5 patients).

Discussion

PE related mortality in our centre is higher as compared to other registries. As early recognition and rapid decision for reperfusion and anticoagulation improve survival outcome, a dedicated multidisciplinary team should be formed to evaluate the high and intermediate risk PE and formulate an individualized treatment plan.

PP6

ADVERSE DRUG REACTIONS TO NINTEDANIB AND PIRFENIDONE REPORTED IN IDIOPATHIC PULMONARY FIBROSIS PATIENTS IN INSTITUTE OF RESPIRATORY MEDICINE

Ming-Yi Khoo, Syazatul Syakirin Sirol Aflah, **Suet Yin Tan**, Zulsairi Mohd Pauzi

Institute of Respiratory Medicine, Kuala Lumpur, Malaysia

Introduction

Idiopathic pulmonary fibrosis (IPF) is an unknown cause of debilitating, irreversible, fatal lung disease. Patients treated with antifibrotics, either nintedanib or pirfenidone, reported adverse drug reactions (ADRs).

Objective

To describe ADRs to nintedanib and pirfenidone reported in IPF patients in the Institute of Respiratory Medicine.

Methodology

A retrospective study of nintedanib and pirfenidone ADRs was conducted by reviewing ADR reports at the Institute of Respiratory Medicine, both inpatient and outpatient settings, from September 2018 to September 2020. Data were analysed using descriptive analysis, and data were reported as percentages.

Results

Of 65 patients treated, 86.2% were male. 35.4% of patients treated developed ADRs, and 91.3% were male. Malays' ADRs were more common (43.5%), followed by Indians (30.4%) and Chinese (21.7%). The mean age was 72. Most patients who developed ADRs had co-morbidities (87.0 per cent) and concurrent medication (82.6 per cent). Most patients received nintedanib (67.7%), but more pirfenidone patients developed ADRs (42.9% vs 34.1%). Gastrointestinal ADRs were the most commonly reported, involving more nintedanib patients (58.3% vs 50.0%). More pirfenidone patients developed dermatologic ADRs (28.6% vs 8.3%). Only nintedanib (25.0%) reported hepatic ADRs. Only pirfenidone (21.4%) reported headaches and dizziness.

Conclusion

In this study, both antifibrotics reported gastrointestinal ADRs most commonly. Only nintedanib reported hepatic ADRs, whereas headaches and dizziness were reported only with pirfenidone. More pirfenidone patients developed dermatologic ADRs.

PP7

EFFECT OF MOVEMENT CONTROL ORDER (MCO) IN MALAYSIA TO HOSPITAL ADMISSION FOR RESPIRATORY TRACT INFECTION IN A TERTIARY HOSPITAL

Fauziah Ripin@Mat Nor[1], **SzeChiang Lui[1]**, Maria Kamal[1], Nanthiny Mahalingam[1], Dk Nurshahidah Nafesah Abd Adzim[1], Asiah Kassim[1,2]

1. *Clinical Research Centre (CRC), Hospital Tunku Azizah, Kuala Lumpur, Malaysia*
2. *Department of Paediatric, Hospital Tunku Azizah, Kuala Lumpur, Malaysia*

Introduction: Respiratory tract infection (RTI) and overcrowding is closely related in children. Among children less than five year old, cross infection due to overcrowding at home or public places like nursery contributes to increase number of respiratory tract infection.

Objectives: To determine the effect of movement control order to the hospital admission for respiratory tract infection among children.

Methodology: This study was done in Hospital Tunku Azizah, Kuala Lumpur which is a tertiary paediatric referral centre. Cases of admission for respiratory tract infection from April 2019-June 2020 were identified from the electronic Hospital Information System (HIS). Demographic data, duration of admission and diagnosis at discharge were obtained from the system. Data was entered into SPSS version 26 and analyzed.

Results: A total of 4287 admissions for respiratory tract infection were analyzed. Majority were male (58.2%), Malay (88.9%), Malaysian (98.1%) with median age of 19.1 months (IQR 9.3-41.5 months). Pneumonia (2318, 54%) was the commonest diagnosis, followed by acute bronchiolitis (555,12.9%) and upper respiratory tract infections (497,11.6%). Mean duration of admission was 3.22 days (SD 7.30 days). A total of 229 cases (5.3%) of recurrent respiratory admissions identified. There was significant reduction in the number of admissions from March 2020 until June 2020 during the enforcement of movement control disorder.

Conclusion: RTI in children is the commonest cause of admission and it can be reduced by simple measure of staying home.

PP8

CONTACT TRACING OF TUBERCULOSIS IN CHILDREN: AN AUDIT OF A TERTIARY HOSPITAL IN 2019.

Fauziah Ripin@Mat Nor[1], Lui Sze Chiang[1], **Maria Kamal[1]**, N. Fafwati Faridatul Akmar[2]. Shangari Kunaseelan[2], Asiah Kassim [1,2]

1. *Clinical Research Centre (CRC), Hospital Tunku Azizah, Kuala Lumpur, Malaysia*
2. *Respiratory unit, Paediatric Department, Hospital Tunku Azizah Kuala Lumpur*

Introduction: Contact tracing for Tuberculosis index case is the key element in Tuberculosis control. It affects the outcome by early detection and control of spread. However, this component is often left out in children which lead to morbidity and mortality due to paediatric tuberculosis.

Objectives: To detect coverage of contact tracing among paediatric cases with TB diagnosis.

Methodology: Data collected from Hospital Tunku Azizah, Kuala Lumpur which is a tertiary paediatric referral centre. Cases of tuberculosis were identified from the electronic Hospital Information System(HIS). Age, diagnosis, contact tracing record and outcome were obtained. Data was entered into the Microsoft Excel and analyzed.

Results: A total of 26 cases of children with tuberculosis diagnosis were admitted in 2019, majority are pre-school children (8, 30.8%). Six (16.7%) had tuberculosis contact prior to diagnosis. Majority of them (15, 41.7%) were smear negative pulmonary tuberculosis, followed by disseminated tuberculosis (5,19.2%) and TB lymphadenitis (2, 7.7%). Contact screening was complete in 20 (76.9%) of the cases, and not complete in 6 (23.1%) of the cases. Two contact of the index cases were under 5 years old. Twenty-two (84.6%) children completed treatment, one (3.8%) stopped treatment, one (3.8%) defaulted and two (7.7%) death reported.

Conclusions: There is room for improvement in contact tracing of tuberculosis in children and it has to be done systematically to ensure the adherence to the contract tracing guidelines and protocols.

PP9

PRIMARY SPONTANEOUS PNEUMOTHORAX - EPIDEMIOLOGY AND MANAGEMENT IN THE PAEDIATRIC POPULATION OF SINGAPORE

Shangari Kunaseelan[1,2], Majid Al-Jabri[2], Daniel Goh[2,3], Michael Lim[2,3], Mahesh Ramamurthy[2,3]

[1]*Hospital Tunku Azizah, Kuala Lumpur, Malaysia*

[2]*Khoo Teck Puat – National University Children's Medical Institute, National University Health System, Singapore*

[3]*Department of Paediatrics, Yong Loo Lin School of Medicine, National University of Singapore*

INTRODUCTION

Primary spontaneous pneumothorax (PSP) is known to be uncommon in the paediatric population and therefore the management strategies have been extrapolated from adult studies and guidelines.

OBJECTIVES

To understand the demographics on the incidence of PSP of the paediatric age group in Singapore as well as its management outcome.

METHODOLOGY

A retrospective review of all patients admitted below the age of 18 years old in National University Hospital, Singapore for the diagnosis of pneumothorax from 2008 till 2019 was conducted. Only patients with PSP were included in the study.

RESULTS

A total of 146 patients were included, with 234 episodes of PSP (91.8% male). Mean age of presentation for first PSP was 16.6 years old. The racial distribution was, 80.1% Chinese, 5.5% Malays, 7.5% Indians, and 6.9% others. Most patients presented with a large pneumothorax at the first presentation (59.6% had a pneumothorax of >30% based on the Colin's method). 98.6% of patients required intervention for their first presentation of PSP, with 18.3% requiring oxygen only, needle aspiration in 7.7%, intercostal drainage in 51.4% and surgical intervention in 22.5%. Recurrence rate was 39%, with 70% presenting within 6 months. There was a lower recurrence rate in patients who underwent surgical intervention compared to the non-operative group (operative group 19.4%, non-operative group 43.6%). The rate of recurrence of a small and moderate size pneumothorax based on Colin's method was higher than a large pneumothorax, 50%, 42.9% and 31% respectively.

CONCLUSION

In the paediatric population of Singapore, the incidence of PSP is higher among Chinese, adolescent, males. To reduce the recurrence rate of PSP in this population, further prospective studies are required for achieving optimal management strategies, as there are differences in outcome from the recommended adult guidelines.

PP10

MANAGEMENT OF EMPYEMA THORACIS IN CHILDREN: WHERE ARE WE?

Hafizah Zainuddin[1], Noor Ain Affendi[2], N. Fafwati[3], Asiah Kassim[3]

[1.] *Department Of Paediatric, Universiti Tekonologi MARA, Selangor, Malaysia.*

[2.] *Department of Paediatric, Hospital Sultanah Nur Zahirah, Terengganu, Malaysia*

[3] *Paediatric Repiratory Unit, Hospital Tunku Azizah, Kuala Lumpur, Malaysia*

Background: Management of empyema thoracis in children is still a challenge in Malaysia. It continues to have a high mortality and morbidity rate. Despite comprehensive clinical practice guideline available for guidance, there is still a big gap from practical aspect point of view which was not reach as expected.

Methodology: A survey was done as pre-workshop evaluation form prior to Empyema Thoracis Workshop held in Hospital Tunku Azizah on 19th September 2020.

Result and discussion: A total of 61 respondents with a mixture of medical, radiology and surgical background doctors involved in this survey. 21.4% of them did not know number of stages of empyema thoracis and 18% did not know when chest tube insertion is indicated. 29.5% of the respondent has no experience using intra-pleural fibrinolytic agent. 96.7% of respondent will do ultrasound thorax in managing complicated pneumonia. 78.7% of them will refer first the case to paediatric respiratory physician and 13% will refer to paediatric surgical team. 27.9% of the respondent did not know the existence of Malaysian Guideline on Empyema Thoracis In Children.

Conclusion: Both medical and surgical intervention has a role in the management of empyema thoracis in children. However, a lack of doctor's knowledge and skill in this field will be an invisible obstacle to offer best treatment to the patient. More education program is needed in future to improve this knowledge gap.

PP11

COVID-19 PANDEMIC: IMPACT OF NATIONAL LOCKDOWN ON PAEDIATRIC HOSPITALIZATIONS FOR RESPIRATORY TRACT INFECTIONS

Hemelamariae Munusamy, Belinda Pek Yee Chin, Raymond Ee Chong Wong, Siew Choo Su
Department of Paediatrics, Hospital Tengku Ampuan Rahimah, Klang, Malaysia

Background: Coronavirus disease 2019 (COVID-19) was declared a pandemic by World Health Organization on 11th March 2020. A week later, a national lockdown was implemented in Malaysia in stages from 18th March 2020.

Objective: The aim of this study was to assess the impact of national lockdown on paediatric hospitalizations due to respiratory tract infections (RTIs).

Methods: We conducted a monocentric, retrospective analysis of paediatric hospitalizations for RTIs during 2 different stages of lockdown in Malaysia (movement control order (MCO) from 18th March till 3rd May 2020 and conditional MCO (CMCO) from 4th May till 9th June 2020) and compared it with hospitalizations for RTIs during the same corresponding period in 2019.

Results: There were 244 paediatric hospitalizations for RTIs between 18th March and 9th June 2020 during the MCO and CMCO period. This was a marked reduction compared to the same period in 2019 with 1118 hospitalizations ($p < 0.001$). During the MCO period in 2020, there was a 71% reduction in paediatric hospitalizations compared to the corresponding period in 2019 (649 vs 187, $p < 0.001$). As for the CMCO period, a reduction of 88% was observed (469 vs 57, $p < 0.001$). There was no significant difference in the median age for patient in both 2020 and 2019 (1.75 (IQR 0.75-4.31) vs 1.91 (IQR 0.96-4.33), $p=0.324$). A reduction of 80% of hospitalizations for upper RTIs were seen across both MCO and CMCO period among these 2 years (372 vs 73, $p<0.001$), and for lower RTIs, a reduction of 77% was observed (746 vs 171, $p<0.001$). No paediatric cases of COVID-19 were found during the study period.

Conclusion: The results of our study strongly suggest that social distancing and other national lockdown measures implemented during this COVID-19 pandemic have significantly reduced the number of RTIs requiring hospitalization among the paediatric population.

PP12

THE RELATIONSHIP BETWEEN LOBAR DISTRIBUTION WITH BRONCHIECTASIS EXACERBATIONS: A RETROSPECTIVE STUDY

Sook Ling Low

University Malaya Medical Centre, Kuala Lumpur, Malaysia

Introduction: Impaired clearance of bronchial mucus has been recognised as a risk factor of recurrent bronchiectasis exacerbations. It is postulated that bronchiectatic bronchi at the lower lobes are more at risk due to their anti-gravity location in mucus clearance. Studies had been performed on the association of number of lobes affected and the frequency of bronchiectasis exacerbation. However, there was no previous study looking into the relationship between the distribution of the affected lobes with the frequency of bronchiectasis exacerbation.

Objectives: To study the relationship between the lobar distribution and the risk of bronchiectasis exacerbation.

Methodology: A retrospective study was done on 100 patients with bronchiectasis under UMMC chest team follow-up. Data collected from patients' medical records from January 2015-December 2019. Characteristics recorded were demographic data, smoking status, aetiologies, duration of bronchiectasis, comorbidities, number of bronchiectasis exacerbations over last two years and lobar distribution of bronchiectasis in HRCT thorax.

Results: Our cohort's mean age was 69.2 ± 11.8 (range 30-93) years. 66% were female. 74% of patients were never smokers. 64% of patients had unknown aetiology of bronchiectasis, followed by post-tuberculosis (21%), post-infection (8%), connective tissue diseases (4%) and genetic (3%). Mean duration of bronchiectasis was 8.3 (range 2-40) years. Comorbidities recorded were diabetes mellitus (24%), bronchial asthma (19%), chronic obstructive pulmonary disease (12%), heart failure (9%), chronic kidney disease (7%) and chronic liver disease (3%). In the univariate analysis, lower lobe combo bronchiectasis appeared to have a higher risk of moderate-severe exacerbations ($p<0.05$). Gender and comorbidities were not statistically significant to predict exacerbations. However, in the multivariate analysis, lower lobe combo bronchiectasis did not reach statistical significance for the risk of moderate-severe exacerbations ($p=0.449$). The number of affected lobes (4 or more) was a more significant risk factor ($p<0.05$).

Conclusion: Our study showed that lower lobe bronchiectasis was not associated with more moderate-severe bronchiectasis exacerbations. The number of affected lobes was a more significant risk factor. However, numerically, the lower lobe involvement appeared to increase the risk of moderate-severe exacerbations. Future studies with bigger sample sizes may resolve this uncertainty.

PP13

KUALA KOH MYSTERIOUS ILLNESS: A RETROSPECTIVE REVIEW OF MEASLES PNEUMONITIS

Nor Diyana Ismail, *Chua Siew Sing, Lai Fong Chiao, Noraini Ab Rahman*
Hospital Sultan Ismail Petra, Kuala Krai Kelantan

Introduction

Measles is a highly contagious, vaccine preventable disease which can potentially cause severe health threat among unvaccinated children. A Kuala Koh measles outbreak had occurred among the indigenous Orang Asli in Kuala Koh Village in May 2019. This rural area in southern Kelantan is a settlement for the Batek tribe community having poor access to health facility and very low vaccination rates.

Objective

The study aims to describe the clinical course and outcomes of a cluster of children affected by measles pneumonitis during the Kuala Koh Measles Outbreak.

Methodology

All Orang Asli children younger than 18 years old hospitalized in Hospital Sultan Ismail Petra during the measles outbreak between May to July 2019 were identified and their case notes were screened. Patients with positive Measles infection were selected for detailed clinical data collection and analysis.

Results

26 patients with positive measles with completed information were analyzed. Their age ranges from 1 month to 14 years with 12 boys and 14 girls. Main indication for admission was for respiratory distress and dehydration. The average length of hospitalization was 8 days. 23 (49%) patients had evidence of pneumonitis of varying severity. 1 patient was ventilated for severe pneumonia complicated with septicemic shock and anuric renal failure requiring dialysis. 5 patients required HFNC and 12 received nasal prong O2. 1 patient was transferred to tertiary hospital for ventilatory support but later succumbed due to sepsis with multiorgan failure. 20 (77%) patients were unvaccinated, 19 (73%) were severely malnourished, 14 (53%) had iron deficiency anemia and 9 (34%) had acute kidney injury due to dehydration or sepsis. None who recovered had major disabilities prior to discharge.

Conclusion

Children with measles pneumonitis may experience serious complications. Among indigenous children, in addition to advocating timely vaccination, early detection and treatment of measles infection and proper management of severe malnutrition may reduce measles mortality and morbidity.

PP14

INHALED BUDESONIDE IN TREATMENT OF ACUTE ASTHMA

Jeeva Janani Kuppusamy
Hospital Duchess of Kent, Sandakan, Sabah

Introduction

Acute exacerbations of asthma are one of the most common medical emergencies in children. Early use of anti-inflammatory therapy using systemic corticosteroids is recommended and has been found beneficial in moderate to severe exacerbation of acute asthma. However, both parenteral and oral corticosteroids have disadvantages, particularly in children. A systematic review and meta-analysis was done to compare the efficacy of nebulised budesonide and oral prednisolone.

Objectives

To evaluate the efficacy of nebulized budesonide compared to oral prednisolone early in acute management of asthma in children

Methodology

Randomized controlled doubleblind trials were identified using PubMed and The Cochrane Library. The study compared the effect of nebulized budesonide and oral prednisolone in the treatment of acute moderate to severe asthma in children.

Results

There were 5 studies involving a total of 341 children between the age 6months to 18 years. Primary comparison was made between the intervention and respiratory status which was assessed by heart rate, respiratory rate and oxygen saturation. Secondary comparison was made between the intervention and lung function (spirometry or PEFR) between 2 and 24 hours after treatment.

Conclusions.

In conclusion, this study indicates that nebulized budesonide is at least as effective as oral steroids for first-line treatment of children requiring hospital admission for severe asthma exacerbations, and is a useful alternative where the use of oral or intravenous steroids cannot be tolerated.

PP15

MALAYSIAN INTERSTITIAL LUNG DISEASE SPECTRUM (MY-ILDS) STUDY

Syazatul Syakirin[1], Prethivan Pillai[2], Norni Natrah[1], Mohd Syahin[1]
Institut Perubatan Respiratori[1], Hospital Kuala Lumpur, Malaysia[2]

Background:
The spectrum of interstitial lung diseases (ILDs) has mainly been reported from developed countries and data from South East Asia is scarce and insipid. The aim of this study is to describe the distribution of various ILDs from a tertiary respiratory institute within developing country, Malaysia. The MY-ILDs study is to our knowledge the largest study on describing ILD in Malaysia.

Methods:
A retrospective study of all patients with ILD was conducted in the National Institute of Respiratory Medicine (IPR) Kuala Lumpur, Malaysia during a 4-year period from 2017 to October 2020.

Results:
A total 411 patients are recorded. The mean age is 60.9 years with an equal gender split of male (47%) and female (55%). The majority of the patients has no family history of ILD (98%) and were non-smokers (72%). The mean percent predicted forced vital capacity at baseline is 63.2% & the majority of patients presented with symptoms (97%) mainly from cough and / or dyspnoea (85%).
The most common ILD subtype is Idiopathic Pulmonary Fibrosis (IPF, 25%), Connective Tissue Disease Related ILD (CTD-ILD, 25%), followed by non-IPF idiopathic interstitial pneumonia (non-IPF-IIP, 23%), hypersensitivity pneumonitis (HP, 12%), Sarcoidosis (9%) and other ILDs (6%).
ILD subtypes by gender suggests that CTD-ILD affects more females (79%) than males (21%) contrary to IPF, which affects more males (80%) than females (20%). Moreover, ILD subtypes by age suggests that CTD-ILD & Sarcoidosis affect younger patients contrary to IPF, which affects elderly patients.

Conclusion:
This study suggests that IPF and CTD-ILD are the most commonly reported ILD subtypes. Moreover, it is suggestive that ILD affects both men and women however, IPF affects elderly men and CTD-ILD affects younger women.

PP16

MALAYSIAN LANDSCAPE OF IDIOPATHIC PULMONARY FIBROSIS STUDY (MAL-IPF)

Syazatul Syakirin[1], Norni Natrah[1], Mohd Syahin[1]
Institut Perubatan Respiratori, Kuala Lumpur, Malaysia[1]

Background:
Although randomized clinical trials (RCT) provide valuable information, patients enrolled are selective due to restrictive inclusion and exclusion criteria. This evidence suggests that there is a need to investigate baseline characteristics in real-world populations of patients with idiopathic pulmonary fibrosis (IPF). MAL-IPF is the largest study addressing the baseline characteristics of IPF in Malaysia.

Methods:
A cross-sectional retrospective study of all patients with IPF (as defined by the 2011 or 2018 ATS/ERS/JRS/ALAT official guidelines for the diagnosis of IPF) conducted in the National Institute of Respiratory Medicine (IPR) Kuala Lumpur, Malaysia during a 3.5 years period between 1st January 2017 – 30 October 2020.

Results:
Out of the 101 IPF cases reported, 80% are males. The mean age of diagnosis is 69.8 years with 51% and 45% being former and never smokers respectively. Nearly all of the patients with IPF have no family history of IPF. The diagnostic methodology used is primarily HRCT scans (93%) . The most commonly reported pattern is Usual Interstitial Pneumonia (UIP, 35%) and Probable UIP (38%) whilst the rest are inconsistent UIP and UIP plus features of emphysema.
The mean per cent predicted forced vital capacity (FVC) is 59% and the majority of the patients with IPF are of GAP Stage 2 & 3 (62%).
81% of the IPF patients presented with at least one comorbidity and the most commonly reported comorbidities are hypertension (28%), diabetes mellitus (27%) and cardiovascular diseases (20%).

Conclusion:
This study suggests that patients with IPF in Malaysia present with a per cent predicted FVC that is lower, with more comorbidities & are staged towards moderate to severe IPF in comparison to RCTs.

PP17

CLINICAL FEATURES AND AETIOLOGY OF PAEDIATRIC BRONCHIECTASIS IN SARAWAK

Li Ying Soo[1], Chiong Hung Kiew[1], Alison Yih-Hua Ting[1, 2]
[1] Sarawak General Hospital, Kuching, Sarawak
[2] Timberland Medical Centre, Kuching, Sarawak

Introduction
Bronchiectasis is the permanent and abnormal widening of the bronchi in the context of chronic airway infection and inflammation. It is caused by a variety of disease processes but in resource-limited countries, infection is still the main concern.

Objectives
To describe the characteristics and underlying causative factors of paediatric patients with bronchiectasis.

Methodology
Retrospective case note review of 19 patients managed at Sarawak General Hospital from 2013 - 2020.

Results
There were 14 boys (male:female ratio = 2.8:1.0). Age at diagnosis was 1 – 136 months old (mean 37.1). Time from first presentation to diagnosis was 1 – 66 months (mean 20.89). Average hospital stay was 7 – 249 days (mean 37.1). The most common clinical manifestations included chronic cough, wheezing, recurrent chest infections and haemoptysis.

Main aetiology of bronchiectasis was infection – viral pneumonia (47.4%) and Pulmonary TB (36.8%). Two cases were associated with congenital lung malformation (CPAM, lung sequestration); 1 had Steven-Johnson syndrome. Three were diagnosed with primary immunodeficiency (congenital neutropenia, Mendelian susceptibility to Mycobacterium, one specific immune defect undetermined).

CT thorax showed patients to have involvement of single lobe (52.6%), two lobes (15.8%), three lobes (10.5%) and > 3 lobes (21.1%). Twelve patients had unilateral distribution of bronchiectasis and 7 bilateral. 10 patients also had features of bronchiolitis obliterans.

Home oxygen post discharge was required in 83% (mean usage 46.53 months). Eight patients remain on home therapy. There was one death.

Conclusion
Early diagnosis and treatment of bronchiectasis is essential and requires a high index of suspicion. Obtaining an aetiological diagnosis is important as this allows targeted treatment to improve both short and long-term outcomes in children.

PP18

BRONCHIOLITIS OBLITERANS IN SARAWAK: AN EPIDEMIOLOGICAL PROFILE IN A TERTIARY CENTRE

Li Ying Soo[1], Chiong Hung Kiew[1], Alison Yih-Hua Ting[1, 2]
[1] *Sarawak General Hospital, Kuching, Sarawak*
[2] *Timberland Medical Centre, Kuching, Sarawak*

Introduction
Bronchiolitis Obliterans (BO) is a rare and severe form of chronic obstructive lung disease resulting from an insult to the lower respiratory tract, predominantly the small airways.

Objectives
To describe the epidemiology of patients in Sarawak General Hospital (SGH) with BO and to explore its risk factors.

Methodology
Retrospective review of 39 patients with BO treated in SGH from 2013 to 2020.

Results
There were 32 boys and 7 girls (male:female ratio 4.6:1.0). Age at onset of symptoms were 1 – 83 months (mean 13.2), with time from first presentation to radiologic diagnosis of 1 – 66 months (mean 23.63). 11 patients were diagnosed at first presentation while the rest had an average of 1 – 15 admissions before diagnosis (mean 2.21). Most common CT findings included mosaic perfusion, air trapping and 10 patients had bronchiectasis.

BO mainly resulted from infection in 38 patients (97.4%); from which were Adenovirus (42.1%), other forms of viral pneumonia (36.8%), Pulmonary TB (18.4%) and Mycoplasma pneumonia (2.6%). One was due to Steven-Johnson Syndrome. Four patients had premorbid conditions; Job's syndrome (2), congenital abnormalities (1) and extreme prematurity (1).

30 patients required ICU admission with 28 requiring ventilatory support (8 NIV). Average duration of hospital stay was 73.2 days. 38 required oxygen therapy post discharge (usage 6 – 89 months (mean 27.24), of these 7 required NIV. 10 patients are currently still on oxygen support. There were two deaths.

Conclusion
Infections appears to play a significant risk factor in the development of BO. Early diagnosis is important and requires a high index of suspicion based on suggestive history, clinical course and supportive radiological findings.

PP19

IMPACT OF COVID 19 PANDEMIC IN CHILDREN HOSPITALIZATION RATE

Tan Ee Lin
Hospital Duchess of Kent, Sandakan, Sabah

INTRODUCTION:
Acute Respiratory Disease is one of the most common cause of hospitalization among children worldwide. Children's immunity is lower compared to an adult, they are higher risk to get infection from many adverse health effects of environmental pollution.

OBJECTIVE:
To study the relationship between children's health and the environmental around them. It is intended to educate and motivate individual that air pollution is a major environmental health that may leads to serious effect on children's health especially respiratory infection.

METHODOLOGY:
A retrospective evaluation for the bed occupancy rate (BOR) comparison during year 2019 and during COVID-19 pandemic period 2020 in children medical ward of a district hospital.
RESULT:
The BOR of children medical ward in 2019 is 117.7% compared to the COVID-19 pandemic period from March to August 2020 which only 58.6%. Among the admission cases, respiratory case occupied 45.8% in year 2019. During COVID-19 pandemic, respiratory case reduces to 38.2%.

CONCLUSION:
Children's hospitalization can be preventable, as children's health condition are affected by their environment. During COVID-19 pandemic period, restriction of movement ordered by the government to control the spreading of Covid 19, most family were forced to stay home and hence children are not exposed to the outside environment. Furthermore, the number of cars, open burning, factories, smokers, and crowding are also reduced which leads to reduced air pollution around us. This help in giving children a healthier air everyday. This benefits in a healthier lung development among children as children's lung are not fully developed at birth and continue develop till adulthood, therefore they are more vulnerable to get infected.
This study is important for understanding that the environment effects in children's health.

PP20

A RETROSPECTIVE STUDY ON EFFICACY AND SAFETY OF HALF TABLET OF AFATINIB IN TREATMENT NAIVE STAGE IV NSCLC PATIENT WITH LOW SOCIOECONOMIC STATUS

Sin Nee Tan[1], Aishah Ibrahim[1], Megat Razeem Abdul Razak[1], Muhammad Naimmuddin Abdul Azih[2], Norra Harun[1] Jamaluddin AR[2], Soon Hin How[2]

1. Hospital Tengku Ampuan Afzan Kuantan, Pahang, Malaysia

2. International Islamic University Malaysia Kuantan, Pahang, Malaysia

Introduction

Afatinib, an irreversible second-generation tyrosine kinase inhibitor (TKI) which targeted on advanced non-small cell lung cancer (NSCLC) with Epidermal Growth Factor Receptor mutations postive (EGFRm+), especially exon 19 deletions and exon 21 p.L858R point mutation. Recommended starting dose of afatinib is 40 mg and it is associated with more adverse events as compared to first generation TKI. A lot of our patients cannot effort full dose of afatinib. Therefore, some patients prefer to take half of recommended dose (half tablet).

Objective

To determine the efficacy and safety of half tablet of afatinib in advanced NSCLC with sensitizing mutation.

Methodology

We retrospectively reviewed patients diagnosed with advanced EGFRm+ NSCLC treated with first-line afatinib (half tablet of 40mg or 50mg daily) in tertiary general hospital. Median progression free survival (PFS) and overall survival (OS) were estimated using the Kaplan-Meier curve.

Results

From January 2017 to June 2019, 15 patients were started on half a tablet of afatinib. 5 (33.3%) started on afatinib 25 mg OD and 10 (66.7%) on 20 mg OD. There were 7 males, 4 smokers and 5 had poor Eastern Cooperative Oncology Group (ECOG) functional status when started on afatinib. Twelve patients had 19 deletion and 3 patient has L858R point mutation. Overall response rate was 100% with median PFS of 12 months. Only 4 patients (26.7%) had up-titrated afatinib dose but others refused to up-titrate dose due to higher cost. Overall, only 1 patient had grade 3 or more side effects, which may not be related to afatinib. Most patients had poor ECOG upon disease progression and some refused chemotherapy or cannot afford osimertinib. Only 8 patients (57%) received second line treatment after disease progression. There are 2 patients still on osimertinib and 1 patient is taking afatinib at the time of analysis. Median overall survival was 16 months.

Conclusion

In patients with advanced EGFRm+ NSCLC, initiating patients on afatinib 20mg or 25 mg OD was associated with similar PFS and better tolerability.

PP21

A 3-YEAR RETROSPECTIVE STUDY OF PATIENTS TREATED FOR SPINAL TUBERCULOSIS IN HOSPITAL RAJA PEREMPUAN ZAINAB II, KOTA BHARU

MF Abu Samah, NH Mohd Aminudin, S Che Sayuti, A Omar, MZ Mat Jaeb
Medical Department Hospital Raja Perempuan Zainab II, Kota Bharu, Malaysia

Objective:
This study was conducted to identify and analyse the clinical characteristic of the spinal Tuberculosis (TB) cases in Hospital Raja Perempuan Zainab II, Kota Bharu.

Methods:
Cases of spinal TB were identified retrospectively by examining the TB records in the Respiratory Clinic Hospital Raja Perempuan Zainab II from 1 January 2016 until 31 December 2018. Clinical features, imaging finding, laboratory results and treatment given were analysed. All spinal TB cases diagnosed in the 3-year period were included in the study. Paediatric cases age less than 12 years and spinal TB cases which change diagnosis were excluded in the study.

Results:
A total of 56 patients with spinal tuberculosis in the 3 years period were included in this study. There were 36 male (64%) and 20 females (36%) with the median age of 47 years old. All patient was given 4 anti TB medication with 23 patients (41%) underwent surgical treatment. 40 patients completed treatment (71%), 9 patients died (16%), 6 patients were loss to follow up (11%) and 1 patient transfer out case. Comorbidities of the patients included diabetes mellitus (n = 16, 29%), end stage kidney disease (n = 6, 11%), HIV (n= 5, 9%) and history of intravenous drug abuse (n=11, 20%). Concomitant pulmonary TB was diagnosed in 9 patients (16%) and others extrapulmonary TB in 6 patients (11%). The clinical presentation included chronic back pain (95%), paraplegia (61%), fever (14%) and constitutional symptoms (39%). Abscess was found in 48% of the cases. The most commonly affected spine was lumbar segment (59%), followed by thoracic (52%), sacral (13%) and cervical (2%). Only 6 cases (11%), the Mycobacterium Tuberculosis was isolated in the tissue or pus culture.

Conclusion:
TB spine has wide clinical heterogenicity with no specific clinical features making it difficult for early diagnosis and management.

PP22

CLINICAL CHARACTERISTICS AND IMMEDIATE OUTCOME OF SEVERE ASTHMA REQUIRING PAEDIATRIC INTENSIVE CARE UNIT ADMISSION: A 5-YEAR EXPERIENCE FROM A SINGLE CENTRE

Hasliza A Razak, Emieliyuza Yusnita Alias, Mohd Nizam Mat Bah
Hospital Sultanah Aminah Johor Bahru, Johor Bahru, Johor

Introduction:
Asthma is a common respiratory illness with high prevalence among children in Malaysia. Understanding the characteristics of patients requiring admission to Paediatric Intensive Care Unit (PICU) and the outcome allow us to improve the management of patients with severe asthma attack.

Objectives:
To study the characteristics, reason of admission and immediate outcome of severe asthma who required PICU admission.

Methodology:
Retrospective observational study of patients below 12 years of age with underlying bronchial asthma admitted in PICU Hospital Sultanah Aminah Johor Bahru from January 2015 to December 2019 for acute exacerbation. Data were retrieved from PICU database.

Results:
There were 2862 PICU admission during the five-year study period with 0.02% (71) due to acute severe asthma. The mean age of the patients was 5.2 years (Q1: 2.7, Q3: 7.0), four out of five were Malay and 55% were females. Seven patients had recurrent PICU admissions. More than 60% were treated with salbutamol infusion and subcutaneous terbutaline followed by 44% with magnesium sulphate and only 4% received aminophylline. The median paediatric index of mortality II (PIM II) score was 0.4 (Q1: 0.3, Q3: 1.4). Twenty-two patients required invasive ventilation with 60% referral from other hospitals. The mean PICU admission was 1.4 days with the longest at 4.5 days. There was one death reported in which patient defaulted follow up with late presentation to the district hospital.

Conclusions:
A significant number of patients with severe asthma required mechanical ventilation in our centre including one death, with compliance as a major issue. This emphasizes the need for proper reinforcement of asthma education to the patients and parents.

PP23

COMBAT – FIGHTING COVID-19 THROUGH INNOVATION

Dr Aisya Natasya Musa, Dr Anas Mat Asis, Prof Dr Sazzli Shahlan Kasim, Assoc. Prof. Dr Ahmad Izuanuddin Ismail
Faculty of Medicine Sungai Buloh, Universiti Teknologi MARA (UiTM), Selangor, Malaysia

Introduction

COVID-19 pandemic causes PPE to be scarce and has affected 600 healthcare workers (HCW) in Malaysia[1]. There is a need for safer swab procedures to protect the HCW.

COMBAT (Coronavirus-19 Mobile Test Unit) provides a safe and comfortable swab-sampling platform. It's a 20ft container with separate HCW compartment and 5 negative-pressure patients' cubicle. HCW area has positive pressure, air-conditioning, intercom, integrated gloves, and pressure monitoring. Patient's cubicle has negative pressure with HEPA filter, automatic door and auto-disinfection. Swabs can be taken with minimal PPE and less time-consuming.

Methodology

The study aims to validate the usage of COMBAT for swab-sampling procedure

Results

From our study, 75% HCW feels more comfortable in COMBAT. Compared to PPE, swab done in COMBAT significantly reduce experience of breathing difficulties (p=0.002), limited view (p=0.001), heat (p=0.002) and sweating (p=0.007). HCW feels as safe PPE but the perceived possibility of getting infected is significantly reduced with COMBAT (p=0.021). 100% recommends COMBAT to other HCW. 91.7% definitely recommend COMBAT to other patients.

Discussion

COMBAT have been shown to be the preferred swab-sampling platform as oppose to traditional swab taking using PPE. It ensures comfort and safety to the HCW and reduces timing of wearing PPE and the long-term cost and supply problem associated with PPE.

Conclusion:

COMBAT unit is a novel innovation that ensures safety for the HCW doing the nasopharyngeal / pharyngeal swab for COVID-19 testing.

References:

Bernama. (2020, September 17). 600 healthcare workers infected with Covid-19 since February. Retrieved September 20, 2020, from https://www.freemalaysiatoday.com/category/nation/2020/09/18/600-healthcare-workers-infected-with-covid-19-since-february/

PP24

USAGE OF HIGH FLOW NASAL CANNULA IN PAEDIATRIC GENERAL WARD SETTINGS IN DISTRICT HOSPITAL OVER 1 YEAR

***LC Tan**, SS Chua, Hasdalina Ishak, Nor Diyana Ismail, FC Lai, Noraini AR*
Hospital Sultan Ismail Petra (HSIP), Kelantan

Introduction:
High-flow nasal cannula (HFNC) is non-invasive ventilation which delivers adjustable mixture of heated and humidified air and oxygen at rates that exceed spontaneous inspiratory flow. It's easy to initiate and usually well tolerated by children. Most centres prefer intensive care unit settings while some centres uses in general ward settings.

Objective:
To evaluate the usage of HFNC in paediatric patients in HSIP general ward settings from April 2019 to March 2020.

Methodology:
A retrospective study on the 177 medical records of the patients (boys: 112, girls: 65) who received HFNC during admissions.

Results:
62.4% cases were referred from two district hospitals while 37.6% cases from our centre. 76% (N=134) patients required immediate initiation of HFNC upon admission. The mean usage of HFNC was 3.2 days with average 7.7 days of hospital stay.

Chi-square test was used to analyze demographic (ethnic, gender, age) and clinical characteristics (weight, nutrition status, respiratory conditions and heart conditions). Amongst the clinical characteristics, 19.6% (N=35) had underlying respiratory conditions, 5.9% (N=10) with cardiovascular disease. 19% (N=34) patients tested positive on respiratory virus test (e.g. metapneumovirus, rhinovirus, Respiratory syncytial virus).

As for outcome, 98% (N=174) of them recovered well while 3% (N=3) required escalation of therapy. Unfortunately, 3 patients with comorbid passed away. One patient had severe malnourished while other two patients with had congenital cyanotic heart with prolonged hospital stay. No major adverse effect was reported but 1 patient had minor burn on cheeks.

Conclusion:
HFNC is an excellent option in providing respiratory support in district hospital with no intensive care unit. Detailed study on safety protocol and cost effectiveness is needed to improve the outcome.

PP25

EFFICACY AND SAFETY PROFILES OF INTRAPLEURAL STREPTOKINASE IN NON-MALIGNANT COMPLEX PLEURAL EFFUSION IN MALAYSIAN SETTING

Muhammad Amin Ibrahim[1], Aisya Natasya Musa[1], Syahrinnaquiah Samsuddin[1], Nur Malina Mat Reffien[1], Mohd Arif Mohd Zim[1]

1. *Faculty of Medicine Sungai Buloh, Universiti Teknologi MARA (UiTM), Selangor, Malaysia*

Introduction

Streptokinase (STK) is the most accessible intrapleural fibrinolytic used in complex pleural effusion (CPE) in Malaysia and has been shown to be beneficial in reducing surgical intervention and resulting in successful drainage[1]. However, few studies have found that it had no significant benefit[2,3].

Methodology

The study aims to assess the efficacy and safety profiles of patients with non-malignant CPE treated with IPSTK from 2018 to June 2020. This is a retrospective analysis of patients with CPE diagnosed by chest-xray who was given IPSTK (3 doses of 500,000iU 12 hourly). Chest-xray was performed after drainage is <100mls within 24 hours and was scored as per MIST1 protocol[3]

Results

Mean age was 48 years old. 71% were male. 54% were right CPE with mean proportion of hemithorax opacified of 63. 57% had pigtail with majority size of <14F (89%). Diabetes (32%) was the commonest comorbidities. 11% had pus aspirate and 14% had culture positive bacteria with mycobacterium tuberculosis (36%) and Klebsiella pmeumoniae (14%) being the commonest pathogen. Chest pain was the commonest complication (18%). There were also 1 pleural haemorrhage (ESRF patient), 1 patient required surgical intervention and 1 reported death non-related to complication of IPSTK (4% each). Mean improvement in fluid opacity was 69% with complete resolution in 11 patients (39.2%). Mean duration of hospital stay was 9 days.

Discussion

The findings in our study are in contrast to what MIST1 trial found. The safety profile of higher dose IPSTK our study is similar to other studies[1]. Our study also was in line with BTS recommendations for small-bore chest tube for pleural drainage[4] and showed that it is still efficacious. This study also highlights the usage of IPSTK in Tuberculous CPE. However, the main limitation of our study is the small sample size.

Conclusion

This study highlights that higher dose IPSTK is safe and effective in treating CPE including pleural tuberculosis.

CASE REPORTS

CR 1 **PULMONARY SARCOIDOSIS: A RETROSPECTIVE STUDY OF 11 CASES**

Nur Husna Mohd Aminudin[1], Ng Boon Hau[2], Huan Nai Chien[1], Ng Khai Lip[1], Fatimah Azmah Mohammad[1], Ummi Nadira Daut[3], Noorul Afidza Muhammad[1], Mona Zaria Nasaruddin[1], Jamalul Azizi Abdul Rahaman[1]

1. Department of Pulmonology, Hospital Serdang, Selangor, Malaysia.

2. Pulmonology Unit, Department of Medicine, Pusat Perubatan Universiti Kebangsaan Malaysia, Kuala Lumpur, Malaysia

3. Pulmonology Unit, Fakulti Perubatan Dan Sains Kesihatan, Universiti Putra Malaysia., Selangor, Malaysia

CR 2 **POST-INFECTIOUS PULMONARY ALVEOLAR PROTEINOSIS?**

Dr JL Lim, Dr Rozanah Abd Rahman

Department of Respiratory Medicine, Hospital Sultanah Aminah Johor Bahru, Malaysia

CR 3 **THIS ABSTRACT HAS BEEN WITHDRAWN**

CR 4 **HIDING IN PLAIN SIGHT: DIAGNOSING PLEURAL TUBERCULOSIS USING LUNG ULTRASOUND**

Mohd Jazman Che Rahim

Hospital Universiti Sains Malaysia, Kubang Kerian, Kelantan

School of Medical Sciences, Universiti Sains Malaysia Health Campus, Kubang Kerian, Kelantan

CR 5 **SEVERE PULMONARY TUBERCULOSIS WITH ORGANIZING PNEUMONIA: A DIAGNOSTIC AMBIGUITY**

Mohd Jazman Che Rahim

Hospital Universiti Sains Malaysia, Kubang Kerian, Kelantan

School of Medical Sciences, Universiti Sains Malaysia Health Campus, Kubang Kerian, Kelantan

CR 6 **SEEING DOUBLE: A CASE OF ETHAMBUTOL-INDUCED SIXTH CRANIAL NERVE PALSY**

Mohd Jazman Che Rahim

Hospital Universiti Sains Malaysia, Kubang Kerian, Kelantan

School of Medical Sciences, Universiti Sains Malaysia Health Campus, Kubang Kerian, Kelantan

CR 7 **THIS ABSTRACT HAS BEEN WITHDRAWN**

CR 8 **PULMONARY EMPHYSEMA IN NEONATAL MARFAN SYNDROME – A CASE REPORT**

Shu Ying Lee, Siew Choo Su

Department of Paediatrics, Hospital Tengku Ampuan Rahimah, Klang, Malaysia

CR 9 **PNEUMOTHORAX AND AORTIC DISSECTION: WHICH OCCURRED FIRST?**

Shan Min Lo, Hema Yamini Ramarmuty

Hospital Queen Elizabeth, Sabah, Malaysia

CR 10 **A RARE CASE OF PRIMARY PULMONARY CARCINOMASARCOMA**

Shan Min Lo, Sugunah Sallapan, Hema Yamini Ramarmuty

Hospital Queen Elizabeth, Sabah, Malaysia

CR 11 **LUNG MASS IN PATIENT WITH CONGESTIVE HEART FAILURE – NOW YOU SEE, NOW YOU DON'T!**

KY Yeh[1], A.F. Ahmad[1], A.Alaga[1] , UA Muthukumaru[2]

[1]Department of Respiratory, Hospital Sultanah Bahiyah, Alor Setar, Kedah, Malaysia

[2]Department of Respiratory, Hospital Pulau Pinang, Pulau Pinang, Malaysia

CR 12 **ACUTE LIFETHREATENING EVENT IN INFANT WITH MASSIVE THYMIC HYPERPLASIA**

Teh Jia Xin[1], Salbiah Binti Awang[1], Noor Ain Binti Noor Affendi[1], Noor Fa'izatul Rahil Binti Ambok Dalek[2], Dato' Dr. Zakaria Bin Zahari[3]

[1]Pediatrics Dept, Hospital Sultanah Nur Zahirah Kuala Terengganu, Malaysia

[2]Pediatrics Surgery Dept, Hospital Sultanah Nur Zahirah Kuala Terengganu, Malaysia

[3]Pediatrics Surgery Dept, Hospital Kuala Lumpur, Malaysia

CR 13 **NOT EVERYTHING IS TB**

Justin Tan Yu Kuan, Azlina Samsudin, Norhaya Mohd Razali

Respiratory Unit, Hospital Sultanah Nur Zahirah, Kuala Terengganu, Malaysia

CR 14 **THE GREAT MASQUERADE: A CONCOMITANT PRESENTATION OF PULMONARY TUBERCULOSIS AND PRIMARY LUNG ADENOCARCINOMA**

Wan Jen Lye

Hospital Sultanah Aminah, Johor Bahru, Malaysia

CR 15 **SECONDARY PULMONARY NODULAR LYMPHOCYTE-PREDOMINANT HODGKIN LYMPHOMA: A CASE REPORT**

Suat Yee Lim, Mohd Faizul bin Abu Samah, Lalitha Pereirasamy, Umadevi A. Muthukumaru, Irfhan Ali bin Hyder Ali
Department of Respiratory Medicine, Hospital Pulau Pinang

CR 16 **LOW DOSE INTRAPLEURAL STREPTOKINASE IN MANAGING LOCULATED EFFUSION AND EMPYEMA IN PATIENTS WITH HIGH RISK OF BLEEDING**

G. Balakrishnan[1], KY Yeh[1], S.N.L.S.N.M.Hisam[1], J.Supramaniam[1], A.Alaga[1], IRH Ali[2]
[1]Department of Respiratory, Hospital Sultanah Bahiyah, Alor Setar, Kedah, Malaysia
[2]Department of Respiratory, Hospital Pulau Pinang, Pulau Pinang, Malaysia

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Noor Ain Noor Affendi
Paediatric Department, Hospital Sultanah Nur Zahirah, Kuala Terengganu, Terengganu

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Amanil `Ula Hassan, Mariana Daud
Hospital Raja Perempuan Zainab II, Kota Bharu, Kelantan, Malaysia

CR 19 **A CASE REPORT OF MEDIASTINAL LYMPHANGIOMA**

Fazila Mat Arifin, Mariana Daud, Mohd Tarmizi Md Nor, Wan Ruzaimie Wan Mohamad
Hospital Raja Perempuan Zainab II, Kota Bharu,

CR 20 **A CASE REPORT OF SEVERE MYCOPLASMA PNEUMONIA WITH AUTOIMMUNE HEMOLYTIC ANEMIA**

Roshan Singh, MBBS**, Swee Wei Tan, MRCPCH**
Hospital Sultan Abdul Halim, Sungai Petani, Kedah, Malaysia

CR 21 **A MIMICKER DISGUISED AS LUNG CANCER**

SL Low[1], YK Pang[1]
[1]University Malaya Medical Centre, Kuala Lumpur, Malaysia.

CR 22 **ANTHRACOSIS WITH PULMONARY TUBERCULOSIS, A CASE REPORT**

Kew YC, Tan HX, Shivaanand a/l Letcheminan, Lam YF, Kumaresh Raj a/l Lachmanan
Pulmonary Department, Hospital Raja Permaisuri Bainun IPOH

CR 23 **B-CELL LYMPHOMA MASQUERADING AS EXTRA-PULMONARY TUBERCULOSIS IN A SMEAR POSITIVE TB PATIENT**

Tan HX, Kew YC, Shivaanand L, Kumaresh L, Lam yf
Hospital Raja Pemaisuri Bainun, Ipoh, Malaysia

CR 24 **ASSOCIATION BETWEEN DOWN SYNDROME AND CYSTIC LUNG DISEASE: A CASE SERIES**

N. Fafwati Faridatul Akmar[1], Shangari Kunaseelan[1], Nicholas Chang[1], Asiah Kassim[1], Che Zubaidah Che Daud[2], T. Hafatin [3] , Arni Talib[4], Sellymiah Adzman[4]
[1]Department of Paediatrics, Hospital Tunku Azizah, Kuala Lumpur, Malaysia
[2]Department of Radiology, Hospital Tunku Azizah, Kuala Lumpur, Malaysia
[3]Department of Paediatric Surgical, Hospital Tunku Azizah, Kuala Lumpur, Malaysia
[4]Department of Pathology, Hospital Kuala Lumpur, Kuala Lumpur, Malaysia

CR 25 **A RARE CASE OF UNDIFFERENTIATED PLEOMORPHIC SARCOMA (UPS) OF THE LUNG**

Shivaanand L, Kew YC, Tan HX, Kumaresh L, Lam YF
Hospital Raja Permaisuri Bainun Ipoh, Malaysia

CR 26 **IT'S A PREMATURE LUNG BUT IT'S NOT BRONCHOPULMONARY DYSPLASIA**

Charlotte Gan N. Fafwati Faridatul Akmar Mohamad[1] , Sellymiah Adzman[2], Che Zubaidah Che Daud[3] , Asiah Kassim[1]
[1]Department of Paediatrics, Hospital Tunku Azizah, Kuala Lumpur, Malaysia
[2]Department of Pathology, Hospital Kuala Lumpur, Malaysia
[3] Radiology Department, Hospital Tunku Azizah Kuala Lumpur

CR 27 **SPONTANEOUS PNEUMOTHORAX DURING PREGNANCY AS INITIAL PRESENTATION OF PULMONARY TUBERCULOSIS**

Nizafaziasyida Fauzee[1] Muhammad Amin Ibrahim[2], Aisya Natasha Musa[2], Mohd Arif Mohd Zin[2]
1. Selayang Hospital, Kuala Lumpur, Malaysia
2. Universiti Teknologi MARA, Kuala Lumpur, Malaysia

CR 28 **CASE REPORT: SUCCESSFUL TRACHEAL DECANNULATION TO NON-INVASIVE VENTILATION IN A CHILD WITH CONGENITAL CENTRAL HYPOVENTILATION SYNDROME**

Yi Cheau Chua, N Fafwati Faridatul Akmar Mohammad, Shangari Kunaseelan, Nor Diyana Ismail, Asiah Kassim

Paediatric Respiratory Unit, Hospital Tunku Azizah, Kuala Lumpur, Malaysia

CR 29 FAILURE TO THRIVE A MANIFESTATION OF PULMONARY VENOLOBAR SYNDROME: A CASE REPORT

[1]Nor Diyana Ismail, [1]Chua Yi Cheau, [1]Shangari Kunaseelan, [1]N Fafwati Faridatul Akmar, [3]Hafatin Fairos, [2]Marina A Marzukie, [2]Normawati M Said, [2]Che Zubaidah Che Daud, [1]Asiah Kassim

[1]Department of Paediatrics, Hospital Tunku Azizah

[2]Department of Radiology, Hospital Tunku Azizah

[3]Department of Peadiatric Surgery, Hospital Tunku Azizah

CR 30 PULMONARY MANIFESTATIONS OF AUTOIMMUNE LYMPHOPROLIFERATIVE SYNDROME: A CASE REPORT

Ainun Nadzurah Bahar[1], N. Fafwati Faridatul Akmar Mohamad[1], Teh Kok Hooi[1], Asiah Kassim[1], Sellymiah Adzman[2], Che Zubaidah Che Daud[3], M. Fitri Shukri Adanan[4]

[1]Department of Paediatrics, Hospital Tunku Azizah, Kuala Lumpur, Malaysia

[2]Department of Pathology, Hospital Kuala Lumpur, Malaysia

[3]Department of Radiology, Hospital Tunku Azizah Kuala Lumpur, Malaysia

4Department of Paediatric Surgery, Hospital Tunku Azizah, Kuala Lumpur, Malaysia

CR 31 NOT THE USUAL SUSPECTS: 3 UNCOMMON CAUSES OF HAEMOPTYSIS IN ADULT PATIENTS

Nai-Chien Huan[1] Khai Lip Ng[1] Teng-Shin Khoo[2] Yean-Chen Lai[2]

[1] Pulmonology Department, Serdang Hospital, Selangor, Malaysia

[2] Department of Medicine, Labuan Hospital, Federal Territory of Labuan, Malaysia

CR 32 ACUTE AND ACCELERATED SILICOSIS: TWO CASE REPORTS

Mohd Faizul Abu Samah, Suat Yee Lim, Sin Nee Tan, Lalitha Perierasamy, Umadevi A. Muthukumaru, Irfhan Ali Hyder Ali

Department of Respiratory Hospital Pulau Pinang, Pulau Pinang, Malaysia

CR 33 ATYPICAL PRESENTATION OF SEVERE MELIOIDOSIS IN A YOUNG INFANT

Shih Ying H'ng[1], Kah Peng Eg[2], Siti Hajar Tubirin[1], Guo Wai Wong[2], Anna Marie Nathan[2], Jessie de Bruyne[1]

[1]University of Malaya Medical Centre, Kuala Lumpur, Malaysia

[2]University of Malaya, Kuala Lumpur, Malaysia

CR 34 GIANT INTRAPULMONARY SOLITARY FIBROUS TUMOUR

Tan HX, Kew YC, Shivaanand L, Kumaresh L, Lam yf

Hospital Raja Pemaisuri Bainun, Ipoh, Malaysia

CR 35 ASPIRATION SYNDROMES AND BRONCHIECTASIS: A CASE REPORT AND REVIEW OF LITERATURE

Nai-Chien Huan[1], Khai-Lip Ng[1], Siti Nabihah Mohamed Hatta[1], Cheong Han Goh[1], Mohamad Khairul Ikram Zainuddin[1], Jamalul Azizi Abdul Rahaman[1]

1. Pulmonology Department, Hospital Serdang, Selangor, Malaysia

CR 36 A CASE REPORT OF COEXISTING ACTIVE PULMONARY TUBERCULOSIS AND ESOPHAGEAL SQUAMOUS CELL CARCINOMA

Noor Izyani Zakaria[1], Cheng Yi Zhi[2], Muhammad Amin Ibrahim[3], Mohd Arif Mohd Zin[4]

1. Selayang Hospital, Selangor, Malaysia

2. Universiti Teknologi Mara, Selangor, Malaysia

CR 37 UNILATERAL CONGENITAL DIAPHRAGMATIC EVENTRATION MIMICKING CONGENITAL DIAPHRAGMATIC HERNIA

Hafiz Ab[1], LC Tan[1], SS Chua[1], Noraini AR[1], M.J. Hanifah[1], Ruzaimi Noor[2], M.R. Hassan[2], M.N. Tarmizi[2]

[1]Hospital Sultan Ismail Petra, Kuala Krai, Kelantan.

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

CR 38 A CASE SERIES OF YOUNG BRONCHIECTASIS: PRIMARY IMMUNODEFICIENCY DISEASE IN LUNG

[1]Farah Ruwaida FR, Munirah M, Nor Suraya S, Fatimah Azmah M, Syazatul Syakirin SA.

Institute of Respiratory Medicine, Malaysia

CR 39 PERICARDIAL EFFUSION AS THE INITIAL PRESENTATION IN YOUNG PATIENTS WITH LUNG ADENOCARCINOMA

Han Loong Tan[1], Mohd Hasnul Helmi Zulkifli[2], Aisya Natasya Musa[2], Muhammad Amin Ibrahim[2], Mohd Arif Mohd Zin[2]

1. Department of Internal Medicine, Selayang Hospital, Selangor, Malaysia

2. Faculty of Medicine Sungai Buloh, Universiti Teknologi MARA (UiTM), Selangor, Malaysia

CR1

PULMONARY SARCOIDOSIS: A RETROSPECTIVE STUDY OF 11 CASES

Nur Husna Mohd Aminudin[1], Ng Boon Hau[2], Huan Nai Chien[1], Ng Khai Lip[1], Fatimah Azmah Mohammad[1], Ummi Nadira Daut[3], Noorul Afidza Muhammad[1], Mona Zaria Nasaruddin[1], Jamalul Azizi Abdul Rahaman[1]

1. Department of Pulmonology, Hospital Serdang, Selangor, Malaysia.

2. Pulmonology Unit, Department of Medicine, Pusat Perubatan Universiti Kebangsaan Malaysia, Kuala Lumpur, Malaysia

3. Pulmonology Unit, Fakulti Perubatan Dan Sains Kesihatan, Universiti Putra Malaysia., Selangor, Malaysia

Introduction: Pulmonary sarcoidosis is a granulomatous disease of unknown aetiology and characterized pathologically by the presence of noncaseating granulomas.

Objective: This study evaluates the clinical characteristic, method of tissue biopsy, pulmonary function tests, and laboratory parameters of in patients with sarcoidosis.

Methodology: A retrospective analysis was made of cases treated at the Serdang Pulmonology Centre, between 2016 and 2020. The diagnosis of sarcoidosis was confirmed histopathologically.

Results: This study recruited 11 patients with pulmonary sarcoidosis. There were 10 females (90.9%) and 1 (9.1%) males. The mean age was 43 years (SD, 12). Pulmonary sarcoidosis was observed in Indian ethnicity (54.5% of cases) and Malay ethnicity (45.5% of cases). The majority (90.9%) were non-smokers. All patients had histological proven of sarcoid tissues where 3 (27.3%) from transbronchial cryobiopsy of the lung (TBLC), 7 (63.6%) from endobronchial ultrasonography with transbronchial needle aspiration (EBUS-TBNA) of mediastinal or/and hilar lymphadenopathy, and 1 (9.1%) from EBUS-TBNA and TBLC. A restrictive ventilatory defect was observed in 54.5% of patients, followed by an obstructive ventilatory defect in 9.1% and normal pulmonary function in 36.4%. The mean serum calcium was 2.43 mmol/L (SD, 0.347). Four patients received steroid therapy for stage 2 and 3 disease, one received steroid and methotrexate for multisystem involvement, and six patients on surveillance for stage 1 pulmonary sarcoidosis.

Conclusion: The most frequent site for histological confirmation was EBUS-TBNA of mediastinal or/and lymph node and transbronchial lung cryobiopsy. Therapy frequently involves corticosteroids for treatment of parenchymal lung sarcoidosis.

CR2

POST-INFECTIOUS PULMONARY ALVEOLAR PROTEINOSIS?

Dr JL Lim, Dr Rozanah Abd Rahman
Department of Respiratory Medicine, Hospital Sultanah Aminah Johor Bahru, Malaysia

We discuss a case of PAP who initially presented as recurrent cryptococcal lung infection, and later on was diagnosed to have pulmonary alveolar proteinosis (PAP). PAP has been reported to be associated with opportunistic lung infection. It is important to recognise this association in order to diagnose an asymptomatic PAP, with high level of suspicion, when opportunistic lung infection was diagnosed in an apparent immunocompetent patient.

Case presentation: A 44-year-old man presented with abnormal chest radiograph (CXR) during pre-employment medical check-up in 2019. He had pulmonary cryptococcosis in 2011 and relapsed pulmonary cryptococcosis in 2016, anti-fungal courses were completed for both infections. He was asymptomatic. CXR 2019 showed bilateral lower zone opacities. CT thorax and VATS lung biopsy were done and findings were consistent with pulmonary alveolar proteinosis (PAP). HIV was negative, CD4 count was 607.

Discussion: Mutation in surfactant proteins or GM-CSF receptor genes with anti-GM-CSF antibodies cause blockade of activation of alveolar macrophages resulting defects in surfactant clearance by alveolar macrophage. Bronchial washing always has milky and opaque appearance. 5% of PAP patients developed opportunistic infection with the lung being the most common site of infection. Of these, extra-pulmonary infections represent 1/3 of opportunistic infections in PAP patients. Opportunistic infection also happened in immunocompetent PAP patients. He was not subjected for whole lung lavage (WLL) or s/c GCF-SC, as he was asymptomatic at diagnosis of PAP. He is on follow-up to monitor his disease progression and possibility of opportunistic (pulmonary and extrapulmonary) infections.

Conclusion: PAP is a rare but important diagnosis to consider when dealing with pulmonary cryptococcosis even in immunocompetent host. High index of suspicion is required as PAP can be asymptomatic.

CR4

HIDING IN PLAIN SIGHT: DIAGNOSING PLEURAL TUBERCULOSIS USING LUNG ULTRASOUND

Mohd Jazman Che Rahim

Hospital Universiti Sains Malaysia, Kubang Kerian, Kelantan
School of Medical Sciences, Universiti Sains Malaysia Health Campus, Kubang Kerian, Kelantan

Introduction: Diagnosing pleural tuberculosis can be difficult in patients with ambiguous presentation, especially in resource-limited health centres. Thus, lung ultrasound had been studied as a novel method in helping clinicians to diagnose this condition.

Case presentation: A 48-year-old lady presented with worsening dyspnoea and orthopnoea for 1 week. She also had loss of weight, minimal dry cough and right-sided pleuritic chest pain for several weeks. Chest radiograph showed a right lower zone pleural effusion with no apparent lung consolidation. Lung ultrasound showed a right apical consolidation and right lower zone septated pleural effusion. Pleural fluid investigations showed exudative feature with mixed lymphocytic, mesothelial and neutrophilic cellular components. Tuberculin skin test were strongly positive. She was subsequently treated for pleural tuberculosis. One month after treatment, she had made considerable improvement in her symptoms.

Discussion: Lung ultrasound had been found to be more effective than chest radiograph in detecting consolidation and diagnosing pneumonia. The portability and efficacy of today's ultrasound machines including the handheld types show that lung ultrasound is a practical, reliable and valuable diagnostic tool in managing pulmonary conditions including tuberculosis, provided that the operators are adequately trained.

Conclusion: Lung ultrasound in tuberculosis is the next frontier for clinicians and researchers.

Authors: Wan Aireene Wan Ahmed[1,2], Mohd Jazman Che Rahim[1,2], Nurashikin Mohammad[1,2], Mohd Hashairi Fauzi[1,2], Shaik Farid Abdull Wahab[1,2]

[1]Hospital Universiti Sains Malaysia, Kubang Kerian, Kelantan
[2]School of Medical Sciences, Universiti Sains Malaysia Health Campus, Kubang Kerian, Kelantan

CR5

SEVERE PULMONARY TUBERCULOSIS WITH ORGANIZING PNEUMONIA: A DIAGNOSTIC AMBIGUITY

Mohd Jazman Che Rahim

Hospital Universiti Sains Malaysia, Kubang Kerian, Kelantan
School of Medical Sciences, Universiti Sains Malaysia Health Campus, Kubang Kerian, Kelantan

Introduction: Pulmonary TB may present insidiously and ambiguously, leaving clinicians with a diagnostic dilemma.

Case presentation: A 30-year-old lady with underlying spinocerebellar ataxia presented with progressive shortness of breath, prolonged cough with whitish sputum, loss of appetite and weight loss of 1-year duration. Physical examination showed a cachectic, tachypnoeic female with finger clubbing and coarse crepitations on lung auscultation. Chest radiograph showed bilateral air space opacities relatively sparing the upper zone. Contrast-enhanced CT thorax revealed bilateral cavitary necrotising consolidations, multiple scattered lung nodules with surrounding ground-glass opacities. After exclusion of alternative diagnoses, cryptogenic organizing pneumonia diagnosis was made. She had a rapid clinic improvement once steroid was started. TB polymerase chain reaction (PCR) from bronchoscopic bronchial washing eventually was positive. Anti-TB treatment was started, and oral steroid was slowly tapered down.

Discussion: Diagnosing OP without lung biopsy requires a multi-disciplinary approach, taking into consideration all available evidences. Early steroid therapy is lifesaving and should be considered after thorough exclusion of alternative diseases.

Conclusion: Organizing pneumonia (OP) may complicate pulmonary TB. Prompt diagnosis using available diagnostic tools and early treatment of both diseases are of utmost importance.

Authors: Mohd Jazman Che Rahim[1,2], Wan Aireene Wan Ahmed[1,2], Nurashikin Mohammad[1,2], Wan Syamimee Wan Ghazali[1,2], Azza Omar[3]

[1]Hospital Universiti Sains Malaysia, Kubang Kerian, Kelantan
[2]School of Medical Sciences, Universiti Sains Malaysia Health Campus, Kubang Kerian, Kelantan
[3]Hospital Raja Perempuan Zainab II, Kota Bharu, Kelantan

CR6

SEEING DOUBLE: A CASE OF ETHAMBUTOL-INDUCED SIXTH CRANIAL NERVE PALSY

Mohd Jazman Che Rahim

Hospital Universiti Sains Malaysia, Kubang Kerian, Kelantan
School of Medical Sciences, Universiti Sains Malaysia Health Campus, Kubang Kerian, Kelantan

Introduction: Ethambutol toxicity is commonly associated with optic neuropathy. Sixth cranial nerve palsy is a rare manifestation of ethambutol toxicity.

Case presentation: A 35-year-old lady developed left eye blurring of vision and double-vision on left lateral gaze after 1 week on ethambutol as part of her smear negative pulmonary tuberculosis treatment. Physical examination showed binocular diplopia on levoversion, relative afferent pupillary defect and reduced color vision. Contrast-enhanced computed tomography and magnetic resonance imaging of the brain were normal. Serum connective tissue disease panel was negative Ethambutol was immediately stopped at presentation. No additional treatment was given except for the remaining anti-tuberculosis drugs and oral pyridoxine. The eye symptoms and signs gradually improved and completely resolved after 2 months.

Discussion: Ethambutol neurotoxicity may affect cranial nerves and may occur at therapeutic dosing.

Conclusion: Physicians need to be vigilant to detect common and uncommon adverse effects of anti-tuberculosis drugs.

Authors: Mohd Jazman Che Rahim[1,2], Wan Aireene Wan Ahmed[1,2], Nurashikin Mohammad[1,2], Wan Syamimee Wan Ghazali[1,2], Sanihah Abdul Halim[1,2]

[1]Hospital Universiti Sains Malaysia, Kubang Kerian, Kelantan
[2]School of Medical Sciences, Universiti Sains Malaysia Health Campus, Kubang Kerian, Kelantan

CR8

PULMONARY EMPHYSEMA IN NEONATAL MARFAN SYNDROME – A CASE REPORT

Shu Ying Lee, Siew Choo Su
Department of Paediatrics, Hospital Tengku Ampuan Rahimah, Klang, Malaysia

Background

Marfan syndrome (MS) is an autosomal dominant condition resulting from FBN1 gene mutation on chromosome 15, which encodes the fibrillin-1 protein. Neonatal MS (nMFS) has more severe clinical features with a poorer prognosis than classical MS, with more severe cardiac involvement and higher likelihood of infantile pulmonary emphysema.

Case report

We report an 8 months old girl with nMFS (genetic confirmation by identification of FBN1 gene mutation on Exon 27). She was delivered term, second of DCDA twins with transient tachypnoea of newborn requiring 6 hours of supplemental oxygen. She had subluxed knees, arachnodactyly, prolapsed anterior mitral valve, mitral regurgitation and aortic root dilatation. She was discharged well at day 14 of life with oral losartan, and planned for conservative management of her cardiac condition due to poor outcome. Her first chest X-ray was unremarkable. She remained well until 4 months of age whereby she required monthly outpatient nebulisation due to episodes of cough and tachypnoea without wheeze, not requiring hospitalization.

She presented to us again at 8 months old with history of cough and reduced feeding for 4 days with rapid breathing, vomiting and lethargy for 1 day. She was tachypnoiec, in respiratory distress with reduced breath sounds bilaterally. She required non-invasive support with BIPAP and subsequently deteriorated on day 2 of admission requiring invasive ventilation. She had reduced breath sound over her left lung with crepitations and intermittent rhonchi. She was started on intravenous bronchodilators (magnesium sulphate and salbutamol) for presumed bronchoconstriction but didn't show a good reponse. Her CXR showed left lung hyperinflation with air space opacity over right lower zone obscuring right hemidiaphragm with worsening bilateral hyperinflation and emphysema. She continued to deteriorate with development of left pneumothorax requiring multiple left chest drainage, and subsequently bilateral pneumothoraces. She finally succumbed at day 14 of admission.

Conclusion

nMFS is associated with high morbidity and mortality before the age of 2 due to rapid progression of the disease and its complications.

CR9

PNEUMOTHORAX AND AORTIC DISSECTION: WHICH OCCURRED FIRST?

Shan Min Lo, Hema Yamini Ramarmuty
Hospital Queen Elizabeth, Sabah, Malaysia

Pneumothorax and aortic dissection are both medical emergencies and requires immediate clinical attention. Clinical presentation for both diseases can range from non-specific chest symptoms to fulminant clinical emergency with symptoms such as chest pain, syncope or dyspnoea. We present a case of pneumothorax with aortic dissection in an otherwise clinically stable patient. A 56 year-old gentleman was referred from district clinic with cough for 2 weeks associated with intermittent hemoptysis. He denied chest pain or dyspnoea. He also complained of hoarseness of voice for the past 1 year. He has a medical background of hypertension diagnosed a year back. He is an ex-smoker with 20 pack year smoking history. Chest radiograph showed that he has left sided pneumothorax so he was transferred to our center. On clinical presentation, his BP was 169/106mmHg, heart rate of 91 beats per min, and his Spo2 was 96% under room air. He was not in respiratory distress. Chest auscultation showed reduced air entry over left lung. His trachea was not deviated. He has no signs to suggest Marfan syndrome. Left chest tube thoracostomy was performed. Direct laryngoscope was performed by otorhinolaryngology team which confirmed that patient has left vocal cord palsy. Further imaging was performed and CT thorax showed that patient has residual left hydropneumothorax with incidental finding of aortic dissection extending distal to the subclavian artery complicated with hematoma within mediastinum and pseudoaneurysm inferior to aortic arch causing the left vocal cord palsy. In this scenario, since patient had hoarseness of voice, we assume that patient has had chronic aortic dissection for 1 year then subsequently develop left pneumothorax. In conclusion, in a scenario whereby patients present with pneumothorax which does not improve despite chest tube insertion, other pathologies such as concomitant aortic dissection has to be considered as well.

CR10

A RARE CASE OF PRIMARY PULMONARY CARCINOMASARCOMA

Shan Min Lo, Sugunah Sallapan, Hema Yamini Ramarmuty
Hospital Queen Elizabeth, Sabah, Malaysia

Primary pulmonary carcinomasarcoma has very rarely been reported in the general population. It is a malignant tumour composed of a mixture of carcinoma and sarcoma. We report a case of primary pulmonary carcinomasarcoma in a 68 year old gentleman who presented to us with a 2-month history of cough, hemoptysis, pleuritic chest pain and dyspnoea. Physical examination as well as chest radiograph were suspicious for collapse of the left lung. CT thorax confirmed an endobronchial mass extending from the left main bronchus, causing complete collapse of the left lung. He also had minimal left sided effusion with no evidence of mediastinal lymphadenopathy. Flexible bronchoscopy revealed a necrotic polypoid mass obstructing the entire left main bronchus. Rigid bronchoscopy was performed later and, part of the mass was debulked. The mass was noted to originate from the superior segment of the left lower lobe. Immunohistochemical stains of the biopsy specimen were positive for a pulmonary rhabdomyosarcoma (Desmin and Myogenin positive). A subsequent CT scan done for staging did not reveal distant metastases. A multidisciplinary meeting was done with oncology and the HPE did showed 10% carcinoma component so he was treated as primary pulmonary carcinomasarcoma. He was given doxorubicin/cisplatin chemotherapy. Unfortunately, patient succumbed after 1 cycle of chemotherapy. With rarity of this disease which only account less than 1% of all primary pulmonary neoplasms, a treatment protocol is not well establish. Further research and studies are need to determine the prognostic factors as well as the best treatment options for these patients.

CR11

LUNG MASS IN PATIENT WITH CONGESTIVE HEART FAILURE – NOW YOU SEE, NOW YOU DON'T!

KY Yeh[1], A.F. Ahmad[1], A.Alaga[1] , UA Muthukumaru[2]

[1]*Department of Respiratory, Hospital Sultanah Bahiyah, Alor Setar, Kedah, Malaysia*

[2]*Department of Respiratory, Hospital Pulau Pinang, Pulau Pinang, Malaysia*

Phantom tumour, vanishing tumour, pseudotumour of lung are term used to describe tumour appearance in Chest X-ray (CXR) of a decompensated heart failure patient which is typically disappear after appropriate treatment of its underlying condition. Its existence might confuse the diagnosis and attribute to the unnecessary invasive diagnostic investigation to patient. We present a case of 64-year-old male, with multiple comorbidities presented with dyspnea, loss of weight and loss of appetite. CXR showed heterogenous opacity over right middle zone with cardiomegaly, raised suspicion of lung mass apart from heart failure. It disappeared with appropriate therapy and the computed tomography (CT) Thorax which was planned by primary team showed no lung mass. This case highlights the importance of high index of suspicion in patient with heart failure presented with lung mass. This is because invasive procedure possesses its own risk and complication which are completely avoidable with just appropriate treatment of fluid overload. Computed tomography is still the best modality in assisting physician in a doubtful case.

CR12

ACUTE LIFE THREATENING EVENT IN INFANT WITH MASSIVE THYMIC HYPERPLASIA

Teh Jia Xin[1], Salbiah Binti Awang[1], Noor Ain Binti Noor Affendi[1], Noor Fa'izatul Rahil Binti Ambok Dalek[2], Dato' Dr. Zakaria Bin Zahari[3]

[1]*Pediatrics Dept, Hospital Sultanah Nur Zahirah Kuala Terengganu, Malaysia*
[2]*Pediatrics Surgery Dept, Hospital Sultanah Nur Zahirah Kuala Terengganu, Malaysia*
[3]*Pediatrics Surgery Dept, Hospital Kuala Lumpur, Malaysia*

Introduction: Massive thymus hyperplasia (MTH) is a rare entity of true thymic hyperplasia, characterized by massive thymic hypertrophy with retention of normal thymic architecture.

Case report: We report a 1-year-old boy, who presented to us with recurrent respiratory distress associated with cyanosis since he was 2 months old. He had multiple hospitalization and one episode of acute life threatening event at 7 months old. Physical examination showed a thriving and not syndromic child with reduced breath sound over right hemithorax. Large anterior mediastinal mass occupied more over right hemithorax was seen from serial chest x-rays. Cardiovascular causes and germinative cell tumour were excluded. Ultrasound and computed tomography of thorax showed a well-defined homogenous solid mass at anterior part of mediastinum. Referral to surgical team was made and he underwent sternotomy and thymectomy at 8 months old. Intraoperative showed giant thymus measuring 11cm x 12cm. Histology examination confirmed normal thymic architecture. Postoperative recovery was uneventful and since then he was well under our follow up.

Conclusion: Massive Thymic Hyperplasia, although rare, should be considered in the differential diagnosis of a child who presents with anterior mediastinal mass.

CR13

NOT EVERYTHING IS TB

Justin Tan Yu Kuan, Azlina Samsudin, Norhaya Mohd Razali
Respiratory Unit, Hospital Sultanah Nur Zahirah, Kuala Terengganu, Malaysia

Objective: To report a case of hypersensitivity pneumonitis and to raise awareness of this uncommon occupational lung disease.

Description: We herein report a 43 year old malay man, non-smoker, working as a timber logger who presented to respiratory clinic with cough associated with weight loss for one month. His Chest X-rays shows interstitial opacity over bilateral upper zones. Sputum acid fast bacili was negative and Mantoux test was 10mm. In view of his symptoms and chest x-ray findings he was treated for smear negative pulmonary tuberculosis but he did not show response to anti tuberculosis medication. On further questioning he admit he had the symptoms for 2 years. Physical examination shows a cachexic middle age man with no signs of connective tissue disorder and pulmonary hypertension. On lung auscultation there were fine crepitation heard form middle zone to lower zone. Autoimmune investigations were negative except for perinuclear anti-neurtophil cytoplasmic antibody. Infective screening was negative and eosinophils counts were normal. Spirometry show a moderate restrictive picture. High resolution computer tomography (HRCT) of the thorax was performed, findings shows no honeycombing but there was loss of lung volume, basal lung has peribronchovascular thickening and infiltrate giving a 'feathery' like appearance. Features were suggestive of Non-specific interstitial pneumonia. The case was discuss in a multidisciplinary discussion involving respiratory physician with expertise in interstitial lung disease. The diagnosis was revise to hypersensitivity pneumonitis secondary to timber dust exposure. The patient was planned for 6 cycles of cyclophosphamide and maintenance therapy with corticosteroid and Nintedinib. HRCT thorax was repeated after 2 cycles of cyclophosphamide and findings shows reduction in the peribronchovascular infiltrates and upper lobe ground glass opacity. Currently patient's activity of daily living is limited to self-care and being on home oxygen therapy.

Conclusion: High index of suspicion for interstitial lung disease must be considered in patients with atypical history of tuberculosis, negative tuberculosis workout and poor response to tuberculosis treatment.

CR14

THE GREAT MASQUERADE: A CONCOMITANT PRESENTATION OF PULMONARY TUBERCULOSIS AND PRIMARY LUNG ADENOCARCINOMA

Wan Jen Lye

Hospital Sultanah Aminah, Johor Bahru, Malaysia

A 40-year-old female presented in January 2020 with the chief complain of fever, cough, loss of appetite and weight, with pleuritic chest pain for past 3 months. A routine chest radiograph showed a right upper lung consolidation, and TB workup was done. Her AFB smears were negative for TB and a CT thorax showed right upper lobe cavitating consolidation with multiple mediastinal lymphadenopathies. A biopsy of the lung mass was done. She was started on AKURIT 4 later in the ward after a sputum gene Xpert detected mycobacterium tuberculosis. The HPE of the mass was consistent with pulmonary TB.

In February 2020, a repeat CT thorax was done as a follow up after 4 weeks of anti-TB treatment, which showed increasing right upper lobe mass and mediastinal lymph node size. Clinically her fever was persistent, and she was losing weight despite being compliant to her medication. The tissue MTB C&S and sputum MTB C&S was positive for mycobacterium tuberculosis complex, sensitive to first line therapy.

She was then admitted to the ward for in-patient DOTS and further workup for prolonged fever with chronic anemia. A bone marrow biopsy was done returned as inconclusive. An OGDS and colonoscopy done was normal. Multiple blood cultures yielded no growth. Her fever persisted despite broad spectrum antibiotics for empirical gram-negative sepsis coverage.

A bronchoscopy done in March 2020 was endoluminally normal. Bronchial washing of the right upper lobe for cytology was negative for malignancy and no growth on BAL MTB C&S. A repeat CT Thorax in April showed an enlarging right lung mass and mediastinal lymph nodes suggestive of malignancy. An urgent repeat of CT guided biopsy was done which then returned as primary lung adenocarcinoma.

She was then referred to the oncology team, in which palliative chemotherapy was given. She succumbed after 3 cycles of platinum-based doublet chemotherapy.

This is to highlight the concomitant presentation of a cavitary lung lesion, progressing to a mass, which biopsy proven to be culture positive pulmonary TB, co-existing in the background of lung adenocarcinoma.

CR15

SECONDARY PULMONARY NODULAR LYMPHOCYTE-PREDOMINANT HODGKIN LYMPHOMA: A CASE REPORT

Suat Yee Lim, Mohd Faizul bin Abu Samah, Lalitha Pereirasamy, Umadevi A. Muthukumaru, Irfhan Ali bin Hyder Ali
Department of Respiratory Medicine, Hospital Pulau Pinang

Background

Secondary pulmonary lymphomas are pulmonary involvement with lymphoma in addition to mediastinal lymph node or evidence of extrathoracic dissemination. The pathogenesis is variable depending on the type of primary lymphoma, with mature B-cell neoplasms being the most frequent cause, although all forms of lymphoma can involve the lungs secondarily. Nodular lymphocyte-predominant hodgkin lymphoma (NLPHL) is an uncommon subtype of hodgkin lymphoma (HL), and accounts for 5% of patients diagnosed with HL. Albeit rare, NLPHL can involve other organ system with 1–4% of the cases have evidence of pulmonary lymphoid infiltrate. Here, we present a case of secondary pulmonary NLPHL which initially work-up for pulmonary tuberculosis (PTB).

Case report

A 58-year-old lady presented with chronic non-productive cough, fever, and night sweats for 4 months. She also had significant anorexia and weight loss. Otherwise, no recent TB contact or travel history was documented. Upon examination, there was presence of multiple enlarged, firm, and non-tender lymphadenopathy over the cervical, supraclavicular, and axillary regions with the largest measuring 3x2cm. There was no palpable hepatosplenomegaly. Chest examination revealed bibasal fine crepitation. Her initial blood investigation showed leucocytosis (white cell counts:17.6x10^3/µL) with neutrophils predominant, anaemia (haemoglobin:9.5 g/dL), and normal platelet count. Lactate dehydrogenase was raised, her renal and liver function were normal. Her chest radiograph revealed bilateral patchy airspace opacity and contrast-enhanced computed tomography thorax showed bilateral multiple lung nodules with cavitating lesions over the right upper and lower lobes. A bronchoscopy and washing was carried out which revealed normal airways and PTB were excluded accordingly. Excisional biopsy of the cervical lymph node subsequently reported the presence of small lymphoid B-cell with immunohistochemical staining suggestive of NLPHL. She was diagnosed with secondary pulmonary NLPHL and referred to haematology team for initiation of chemotherapy.

Conclusion

The initial presentation of secondary pulmonary lymphoma may mimic chronic infection such as PTB in the presence of non-specific and variable radiological findings. Timely and accurate histopathological diagnosis will improve the treatment outcome for these patients.

CR16

LOW DOSE INTRAPLEURAL STREPTOKINASE IN MANAGING LOCULATED EFFUSION AND EMPYEMA IN PATIENTS WITH HIGH RISK OF BLEEDING

G. Balakrishnan[1], KY Yeh[1], S.N.L.S.N.M.Hisam[1], J.Supramaniam[1], A.Alaga[1], IRH Ali[2]

[1]*Department of Respiratory, Hospital Sultanah Bahiyah, Alor Setar, Kedah, Malaysia*

[2]*Department of Respiratory, Hospital Pulau Pinang, Pulau Pinang, Malaysia*

Intrapleural fibrinolytic agent is used to dissolve fibrinous membrane to improve pleural fluid drainage following infection. Evidence from MIST-1 trial shows intrapleural streptokinase 250,000 u BD for 3 days does not improve outcomes but meta-analysis from Cochrane library evaluated 4 trials and concluded that intrapleural streptokinase able to reduce hospital stay and produce radiological improvement. Hence, intrapleural streptokinase has been used for treatment of loculated pleural effusion especially in the centers' without accessibility to Alteplase. We would like to report 2 cases that have been treated for loculated effusion with low dose Intrapleural Streptokinase at 250,000u OD for 3 days due to high risk of bleeding and outcome were promising without any major complication. First patient is a 53-year-old lady presented with right lung empyema, developed left basal ganglia bleeding during admission. Chest drain was inserted and reduced dose of intrapleural streptokinase was given. Patient's symptoms and Chest X-ray improved post treatment, she was discharged well. Second patient is a 48-year-old lady who had underlying Stage 4 Adenocarcinoma of Lung. On interim CT thorax post chemotherapy, noted patient has large loculated effusion over upper lobe of left lung. Low dose of Intrapleural Streptokinase was given in view patient had haemoptysis. Repeated CT thorax post treatment shows significant reduction in size of effusion. Although role of streptokinase in managing loculated pleural effusion had been debatable, a successful treatment response has been observed in our case series. Low dose Intrapleural Streptokinase can be utilised in treatment of loculated pleural effusion in patients with high risk of bleeding.

CR17

CLINICAL CHARACTERISTIC AND COURSE POST INFECTIOUS BRONCHIOLITIS OBLITERANS IN CHILDREN- A CASE SERIES

Noor Ain Noor Affendi

Paediatric Department, Hospital Sultanah Nur Zahirah, Kuala Terengganu, Terengganu

Introduction: Post Infectious Bronchiolitis Obliterans (PIBO) is a chronic obstructive lung disease after severe lower respiratory tract infection. We aim to look for clinical characteristics, risk factors, radiological findings and outcome of treatment for PIBO.

Methods: We performed a retrospective review of medical records of patients aged 0-12 years old who was newly diagnosed with Post Infectious Bronchiolitis Obliterans at Hospital Sultanah Nur Zahirah from 2018 to 2020.

Results: We analyzed 4 patients aged 5 to 16 months. All of them presented with tachypneic, hypoxia, crepitations and wheezing. Three of them was born premature with bronchopulmonary dysplasia. Respiratory Syncytial Virus is the common pathogens identified. All of them had air trapping, atelactasis and mosaic pattern from CT thorax. Pulses methylprednisolone were given to all patients. All of them were discharged with home oxygen.

Conclusion: PIBO should be suspected in children with persistent respiratory symptoms after severe or recurrent LRTI. Recurrent or severe LRTI, mechanical ventilation, prematurity and bronchopulmonary dysplasia are an important risk factors. Pulse corticosteroid is a safe alternative to prolonged systemic corticosteroid.

CR18

A CASE SERIES OF CHILDHOOD INTERSTITIAL LUNG DISEASE (cHILD)

Amanil `Ula Hassan, Mariana Daud
Hospital Raja Perempuan Zainab II, Kota Bharu, Kelantan, Malaysia

Childhood ILD encompasses a broad heterogenous collection of rare, diffuse lung diseases, not limited to lung parenchyma but also involving pulmonary vasculature, airways, alveolar, and it is characterized by abnormal gas exchange due to altered structure of the lung interstitium.

We report 6 cases with childhood ILD, ranging age 19 months to 8 years old with varies presentations. Three of them presented with recurrent anemia associated with respiratory distress, and the other 3 patients manifested chronic hypoxia and digital clubbing. High resolution CT thorax done for all cases showing diffuse interstitial lung disease changes. Lung biopsy was performed in one of the cases, revealed features suggestive of pulmonary hemosiderosis. All of the patients received pulses of IV methylprednisolone. One patient requires home oxygen therapy. Unfortunately, 2 cases were succumbed to the illness.

Childhood ILD may present in early life and the distinct presentation may be overlap with other diseases. Diagnosis could be made from persistent clinical symptoms and physical signs, with diffuse interstitial radiological findings. Genetic studies and lung biopsy may support the diagnosis. Generally, the patient responds well with immunosuppressive treatment and some may require supportive treatment ie: home oxygen therapy. The prevalence of this disorder may still be under estimated. Therefore, clinician awareness of childhood ILD is important and further improvement in diagnostic tools may result in greater case ascertainment.

CR19

A CASE REPORT OF MEDIASTINAL LYMPHANGIOMA

Fazila Mat Arifin, Mariana Daud, Mohd Tarmizi Md Nor, Wan Ruzaimie Wan Mohamad
Hospital Raja Perempuan Zainab II, Kota Bharu

Lymphangioma is a developmental malformation of the lymphatic system. It frequently located in cervical and axillary regions. Isolated lymphangioma in mediastinal is very rare which account less than 1% and mostly asymptomatic and are found accidentaly in adulthood.

We report a case of one year old, girl presented with unresolved cough for two months. She was completed multiple course of antibiotics. Clinically, she appeared afebrile and not in respiratory distress. Serial CXR showed left heart enlargement. Ultrasound thorax showed loculated left pleural effusion with multiple septation. She was proceeded with Contrast Enhanced Computed Tomography (CECT) Thorax which showed large fluid filled sac anteriorly, lateral to the heart but not compressing the heart. Our impression is an intrapulmonary bronchogenic cyst.

Diagnostic thoracoscopic, thoracotomy and excision of cyst was done. Intra operative findings noted multiloculated septated cystic lesion located in right thoracic cavity arises from the mediastinum extending superiorly to the thymus and inferiorly to diaphragm. There is presence of adhesion between the lesion and to the pericardium, right hemithorax and diaphragm. Histopathological Examination result showed features of lymphatic malformation.

Initial diagnosis for this patient was left empyema thoracis. However after review the CECT Thorax, we think of bronchogenic cyst but intraoperative and HPE result showed lymphatic malformation. There will be no spontaneous resolution for lymphangioma and the treatment is excision or sclerosis.

CR20

A CASE REPORT OF SEVERE MYCOPLASMA PNEUMONIA WITH AUTOIMMUNE HEMOLYTIC ANEMIA

Roshan Singh, MBBS**, Swee Wei Tan, MRCPCH**
Hospital Sultan Abdul Halim, Sungai Petani, Kedah, Malaysia

Mycoplasma Pneumoniae is a common respiratory pathogen that cause community acquired pneumonia (CAP) and it is more common in school going children. Apart from respiratory tract infections, this organism produces a spectrum of non-pulmonary manifestations range from hematological, dermatological, neurological, musculoskeletal, renal, cardiac and also gastrointerstinal. The treatment approach has varied over time. In this report, we would like to share our experience in a case of Mycoplasma Pneumonia with Autoimmune Hemolytic Anemia (AIHA).

CR21

A MIMICKER DISGUISED AS LUNG CANCER

SL Low[1], YK Pang[1]
[1]*University Malaya Medical Centre, Kuala Lumpur, Malaysia*

Background: Tuberculosis can present with a variable clinical picture, making the diagnosis difficult. Here, we report a case of disseminated TB presented with lung mass and lytic bone lesions.

Case description: A 49-year-old gentleman, ex-smoker, presented initially to another hospital with breathlessness for 2 days, pleuritic chest pain, anorexia and loss of weight for 1 month. His CXR showed bilateral pleural effusion. Pleural tapping drained haemoserous exudative pleural fluid, pH and glucose were not low, cultures were negative. His sputum AFB direct smears were negative. He was treated for community acquired pneumonia with bilateral parapneumonic effusion with antibiotic and discharged home. However, he presented 3 days later to UMMC with worsening of breathlessness. There was clinical and radiological evidence of bilateral pleural effusion. Pleural tapping aspirated haemoserous exudative pleural fluid, with WBC 30 (polymorph 33% lymphocyte 67%). Pleural fluid culture, AFB and MTB culture were negative, cytology showed no malignant cells. He was worked up for lung carcinoma. Computed tomography of thorax showed right lower lobe consolidation, bilateral pleural effusion, subcentimeter pretracheal and prevascular lymph nodes and multiple lytic lesions. A Positron Emission Tomography – Computed Tomography (PET/CT) was performed to identify ideal site for biopsy where it showed hypermetabolic right lower lobe mass, bilateral pleural involvement, cervical and mediastinal nodal, and bone “metastasis”. CT guided biopsy of right 4th rib soft tissue lesion revealed granulomatous inflammation and scattered multinucleated giant cells. No evidence of malignancy seen. Ziehl-Neelsen stain was negative for AFB. He was treated as disseminated tuberculosis (involving lung, pleural, lymph nodes, bones) and started on anti-TB. During our clinic follow up, he made marked clinical and radiological improvement.

Conclusion: TB is a great mimicker of many other clinical conditions. A high index of suspicion should be placed for this disease, especially when other suspected conditions have been excluded. A tissue biopsy is often helpful when extrapulmonary sites are involved.

CR22

ANTHRACOSIS WITH PULMONARY TUBERCULOSIS, A CASE REPORT

Kew YC, Tan HX, Shivaanand a/l Letcheminan, Lam YF, Kumaresh Raj a/l Lachmanan
Pulmonary Department, Hospital Raja Permaisuri Bainun IPOH

Introduction:

An 81 years old gentleman, non smoker, a pensioner from the Department of Survey and Mapping, was diagnosed with smear positive pulmonary tuberculosis and was started on anti-tuberculosis treatment (ATT). After 130 days of intensive phase, there was no weight gain and no radiological improvement. Sputum MTB culture sent prior to initiation of ATT has isolated mycobacterium tuberculosis, which is sensitive to all first line ATT. CECT thorax was then arranged to look for other causes of poor radiological resolution. TB treatment was switched to maintenance phase. CT thorax done revealed consolidative changes at both upper lobe with foci of calcification within the lesion, centrilobular nodules in varying sizes scattered in both lung fields, and multiple mattered mediastinal lymph nodes with foci of calcification. Flexible bronchoscopy was performed and revealed multiple superficial blackish flat spots on the surface of bronchial mucosa. Bronchial washing cyctology reported no malignant cells. This patient has anthracosis with Pulmonary Tuberculosis. He completed 9 months of TB treatment and on follow-up remains well.

Conclusion:

There is an increased risk of Pulmonary Tuberculosis in patients with anthracosis. A detailed occupational history and CT thorax interpretation is important to raise the clinical suspicion. Early confirmation of diagnosis with flexible bronchoscopy can avoid unnecessary prolonged TB treatment.

CR23

B-CELL LYMPHOMA MASQUERADING AS EXTRA-PULMONARY TUBERCULOSIS IN A SMEAR POSITIVE TB PATIENT

Tan HX, Kew YC, Shivaanand L, Kumaresh L, Lam yf
Hospital Raja Pemaisuri Bainun, Ipoh, Malaysia

The prevalence rate of Tuberculosis (TB) in Malaysia now stands at 92 per 100,000 population, posing a major public health problem. The endemicity of TB with the heterogenous clinical features often leads to overdiagnosis in Malaysian patients. In many cases, lymphoma is often overlooked as a possible diagnosis, given the clinical similarities between TB & lymphoma. In addition to that, co-existential relationship between the two diseases are extremely rare, making it difficult for physicians to identify and manage. It is also theorized that Mycobacteria Tuberculosis alters elements of body cells which induces a mutagenesis effect in them. This would explain how both pathologies exist at the simultaneously.

This study reports a case of a 60-year-old lady with underlying Diabetes Mellitus, hypertension & multinodular goiter was diagnosed to have smear positive pulmonary TB in January. She was progressing well with her treatment until mid-way maintenance therapy she started deteriorating. She was experiencing anorexia, weight loss & cognitive dysfunction for a month and ultimately abdominal pain which lead her to be hospitalized. Clinically patient had hepatosplenomegaly whereby imaging showed multiple liver & spleen lesions. The initial impression was disseminated TB with the possibility of multi-drug resistance TB. Despite on treatment, patient continued to deteriorate which preempted further diagnosis with bone marrow aspirate & trephine which eventually yield B cell lymphoma. However, treatment was not given due to the progression of her disease with multi-organ failure which lead to her demise.

The high prevalence of TB cases in Malaysia often impel us to treat doubtful cases of lymphomas as TB initially. However, one must not see a case solely by clinical and radiological findings as it may lead us astray. In fact, all physicians should be resolute to find microbiological and histopathological confirmation to make the final diagnosis. In the scenario where one is compelled to start empiric therapy without confirmation, these patients should be followed up very closely with high index of suspicion.

CR24

ASSOCIATION BETWEEN DOWN SYNDROME AND CYSTIC LUNG DISEASE: A CASE SERIES

N. Fafwati Faridatul Akmar[1], Shangari Kunaseelan[1], Nicholas Chang[1], Asiah Kassim[1],
Che Zubaidah Che Daud[2], T. Hafatin [3], Arni Talib[4], Sellymiah Adzman[4]
[1]Department of Paediatrics, Hospital Tunku Azizah, Kuala Lumpur, Malaysia
[2]Department of Radiology, Hospital Tunku Azizah, Kuala Lumpur, Malaysia
[3]Department of Paediatric Surgical, Hospital Tunku Azizah, Kuala Lumpur, Malaysia
[4]Department of Pathology, Hospital Kuala Lumpur, Kuala Lumpur, Malaysia

Introduction:

Subpleural lung cysts are seen in children with Down Syndrome. Congenital heart disease was reported as a major risk factor for subpleural lung cysts in Down syndrome patients. We describe three children with Down syndrome who presented with recurrent pneumonia and oxygen dependency.

Case Series:

Case 1:

8 month-old, Orang Asli girl who was born premature at 35 weeks gestation. She underwent AVSD repair and PDA ligation at 2 month old. Postoperatively, she developed recurrent pneumonia needing multiple episodes of ventilation and subsequently became non-invasive ventilation dependent. Her high resolution CT thorax showed ground glass appearance with subpleural cysts.

Case 2:

16 month-old, Malay boy who was born term, presented with recurrent pneumonia and became oxygen dependent following his last episode of pneumonia. He was noted to have failure to thrive with significant respiratory distress. His serial chest x-rays showed ground glass appearance which was confirmed by high resolution CT thorax with additional finding of subpleural cysts.

Case 3:

19 month-old, Sabahan girl who was born term. She underwent VSD and ASD closure together with PDA ligation at 2 month old. She had recurrent pneumonia and clinically she was noted to be small for age with respiratory distress. Her high resolution CT thorax confirmed ground glass appearance with subpleural cysts.

All of these 3 patients underwent open lung biopsy and histological examination confirmed the diagnosis of interstitial pneumonitis. They were treated with steroid and responded well.

Conclusion:

This case series highlight the diagnosis of subpleural cysts in Down Syndrome children which requires combination of clinical suspicion, CT imaging and histopathology report.

CR25

A RARE CASE OF UNDIFFERENTIATED PLEOMORPHIC SARCOMA (UPS) OF THE LUNG

Shivaanand L, Kew YC, Tan HX, Kumaresh L, Lam YF
Hospital Raja Permaisuri Bainun Ipoh, Malaysia

Primary pulmonary undifferentiated pleomorphic sarcoma (UPS) is a very rare form of lung cancer. Estimated prevalence is less than 0.5% of lung cancers. In fact less than 100 cases have been reported to the best of our knowledge. Previously some cases have been reported as Malignant Fibrous Histiocytoma.

We report a case of a 54 year old lady with history of left breast sarcoma treated with mastectomy and radiotherapy in 2003. She presented with chronic cough and loss of weight for 3 months. TB workup was negative. CT scan showed a 7cm irregular lobulated anterior left lower lobe mass with surrounding local lung metastases. Flexible bronchoscopy done twice showed an irregular endoluminal lesion which biopsy only showed necrotic tissues on each attempt. Percutaneous CT guided biopsy also showed necrotic tissue.

In view of ongoing weight loss and chronic anemia suspicion of a malignant lesion was high. Repeat CT scan showed increased size of the mass with possible metastases to the liver as well.
Eventually surgical biopsy via mini thoracotomy showed high grade sarcoma, favoring undifferentiated pleomorphic sarcoma (UPS). Patient was then referred to different center for subsequent management and chemotherapy.

This case highlights the occasional difficulty in obtaining a proper tissue diagnosis for UPS, as our initial 3 attempts via minimally invasive methods were inconclusive. Due to the need for significant tissue sample for proper examination and extensive histochemical staining, sometimes earlier surgical biopsy may offer a better method of obtaining an accurate diagnosis. Persistence is paramount.

CR26

IT'S A PREMATURE LUNG BUT IT'S NOT BRONCHOPULMONARY DYSPLASIA

Charlotte Gan N. Fafwati Faridatul Akmar Mohamad[1], Sellymiah Adzman[2], Che Zubaidah Che Daud[3] , Asiah Kassim[1]

[1]Department of Paediatrics, Hospital Tunku Azizah, Kuala Lumpur, Malaysia

[2]Department of Pathology, Hospital Kuala Lumpur, Malaysia

[3] Radiology Department, Hospital Tunku Azizah Kuala Lumpur

Introduction:

Bronchopulmonary dysplasia (BPD) is a common complication of premature infants who has persistent respiratory features and requiring long-term oxygen support. Pulmonary hemosiderosis in premature infant may mimic BPD clinical features and radio-imaging.

Case report:

A 6 months old infant who is the only surviving infant of MCDA twins, born premature at 29- week gestation due to maternal preterm pre-labour rupture of membrane secondary to urinary tract infection. Postnatal period was complicated with multiple episodes of intubations due to worsening respiratory distress associated with multiple blood transfusions due to recurrent anemia. No frank pulmonary hemorrhage or evidence of internal bleeding were noted in all events. Serial general radiographs and CECT thorax done were suggestive of interstitial lung changes. The possible diagnosis of pulmonary hemosiderosis is more likely than BPD and can be differentiated by lung Histopathology examination.

Conclusion:

Pulmonary hemosiderosis in a premature infant is a challenge for clinician to suspect and confirm the diagnosis. The management is more specific than BPD.

CR27

SPONTANEOUS PNEUMOTHORAX DURING PREGNANCY AS INITIAL PRESENTATION OF PULMONARY TUBERCULOSIS

Nizafaziasyida Fauzee[2] Muhammad Amin Ibrahim[2], Aisya Natasha Musa[2], Mohd Arif Mohd Zin[2]

1. Selayang Hospital, Kuala Lumpur, Malaysia

2. Universiti Teknologi MARA, Kuala Lumpur, Malaysia

Introduction: Spontaneous pneumothorax occurring in pregnancy as early in first trimester is relatively rare and active pulmonary tuberculosis as the underlying lung pathology is even uncommon. We report a case of pregnant lady presented with spontaneous pneumothorax secondary to pulmonary tuberculosis as underlying pathology.

Case Report: A healthy 32 years old G2P1, at 10 weeks period of gestation, presented with complain of sudden onset of breathlessness preceded by palpitation and right-sided pleuritic chest pain while at rest. She was subjected for plain chest radiograph with abdominal shield which showed massive right-sided pneumothorax. Chest tube was inserted. She had persistent air leak despite trial of low pressure high volume suction and later was discharged with Pneumostat. A week later, repeated chest radiograph showed resolved pneumothorax with right upper lobe collapse. Further investigations revealed her sputum for GeneXpert for tuberculosis is positive. She was immediately commenced on anti-tuberculosis treatment and closely monitored by multi-disciplinary team.

Discussion: Pneumothorax should be considered as a differential in pregnant lady presented with acute dyspnea. The prevalence of spontaneous pneumothorax is 1.2-2.6/100000 in females with fewer than 56 cases of pneumothorax during pregnancy reported in the literature. Commonest pathology that need to be excluded in this child bearing age group whom presented with pneumothorax include pulmonary tuberculosis and lymphangioleiomyomatosis.

Conclusion: In pregnant population who presented with spontaneous pneumothorax, an early recognition and prompt treatment are crucial to prevent maternal and child complication. Tuberculosis need to be considered as a cause especially in endemic area.

CR28

CASE REPORT: SUCCESSFUL TRACHEAL DECANNULATION TO NON-INVASIVE VENTILATION IN A CHILD WITH CONGENITAL CENTRAL HYPOVENTILATION SYNDROME

Yi Cheau Chua, N Fafwati Faridatul Akmar Mohammad, Shangari Kunaseelan, Nor Diyana Ismail, Asiah Kassim
Paediatric Respiratory Unit, Hospital Tunku Azizah, Kuala Lumpur, Malaysia

Abstract

Congenital Central Hypoventilation Syndrome (CCHS) is a rare, life-threatening and lifelong multisystem disorder characterized by autonomic nervous system dysfunction, which always manifests as failure to maintain ventilatory homeostasis. We report a case of a child presented at 1 month old with CCHS and confirmed PHOX X 2B study. She failed non-invasive ventilation (NIV) during infancy and received a tracheostomy with long term ventilation. At the age of 7 years old, she is ventilator dependent during nocturnal sleep. A stepwise approach of tracheostomy decannulation was done and NIV application followed by monitoring were done. Her tracheostomy was successfully decannulated and changed to NIV at 7 years 10months old.

Keywords: Congenital Central Hypoventilation Syndrome; non-invasive ventilation; tracheostomy; PHOX2B

CR29

FAILURE TO THRIVE A MANIFESTATION OF PULMONARY VENOLOBAR SYNDROME: A CASE REPORT

[1]Nor Diyana Ismail, [1]Chua Yi Cheau, [1]Shangari Kunaseelan, [1]N Fafwati Faridatul Akmar, [3]Hafatin Fairos, [2]Marina A Marzukie, [2]Normawati M Said, [2]Che Zubaidah Che Daud, [1]Asiah Kassim

[1]Department of Paediatrics, Hospital Tunku Azizah

[2]Department of Radiology, Hospital Tunku Azizah

[3]Department of Peadiatric Surgery, Hospital Tunku Azizah

Introduction:

Pulmonary venolobar syndrome is a rare congenital lung pathology in children. Usually children will present with respiratory distress and recurrent pneumonia.

Case report:

A 19 months-old girl was seen at a local health clinic for a short history of fever, cough, tachypnoea and failure to thrive. Her respiratory symptoms improved with oral antibiotics. She was born postdate via emergency caesarian section for failed induction of labor with a birth weight of 3kg and uneventful neonatal period. She had no recurrent pneumonia, no feeding difficulties and no contact with sick person. She is clinically small with height and weight below 3rd centile, had mild tachypnoea with prominent subcostal and intercostal recession, no chest deformity and had reduced breath sound localized to lower half of right lung. The routine chest radiograph revealed right sided homogenous opacity of right middle and lower zone with a well-defined diaphragm and right heart border. Further radio-imaging studies showed multiple pathology in the lung, heart and liver. She had surgical intervention to treat her condition.

Conclusion:

Any child with failure to thrive must be investigated to find the underlying cause.

CR30

PULMONARY MANIFESTATIONS OF AUTOIMMUNE LYMPHOPROLIFERATIVE SYNDROME: A CASE REPORT

Ainun Nadzurah Bahar[1], N. Fafwati Faridatul Akmar Mohamad[1], Teh Kok Hooi[1], Asiah Kassim[1], Sellymiah Adzman[2], Che Zubaidah Che Daud[3], M. Fitri Shukri Adanan[4]

[1]*Department of Paediatrics, Hospital Tunku Azizah, Kuala Lumpur, Malaysia*
[2]*Department of Pathology, Hospital Kuala Lumpur, Malaysia*
[3]*Department of Radiology, Hospital Tunku Azizah Kuala Lumpur, Malaysia*
4Department of Paediatric Surgery, Hospital Tunku Azizah, Kuala Lumpur, Malaysia

Introduction

Autoimmune Lymphoproliferative (ALPS) is a rare primary immune disorder which dysregulates the immune system due to its inability to regulate lymphocyte homeostasis through the process of lymphocyte apoptosis. Common presentation includes chronic lymphadenopathy and/or splenomegaly in a healthy child. They present with episodes of fatigue, pallor, icterus with hemolytic anemia, spontaneous bruises, mucocutaneus hemorrhages or bacterial infections. We report the unusual presentation of a boy with lung manifestations of ALPS which is not commonly described.

Case report

A 9-year-old boy was diagnosed with autoimmune lymphoproliferative syndrome (ALPS) at the age of 3 months old. He was started on many types of immunotherapy. At 9 years old, he presented with chronic cough for 2 months and was treated as smear negative pulmonary tuberculosis. Despite good compliance, he had persistent cough with respiratory distress. He had persistent tachypnea, lung crepitations and oxygen dependency. His serial chest x-rays showed persistent reticulonodular opacities of both lung fields and Contrast enhanced CT thorax with HRCT reconstruction revealed diffuse micronodules in both lung parenchyma with irregular and nodular wall of airway. He underwent flexible bronchoscopy which demonstrated a normal airway. Open lung biopsy histopathology examination reported lung fibrosis and not suggestive of Tuberculosis.

Conclusion

ALPS is a rare genetic disorder of the immune system which rarely associated with symptomatic lung manifestations.

CR31

NOT THE USUAL SUSPECTS: 3 UNCOMMON CAUSES OF HAEMOPTYSIS IN ADULT PATIENTS

Nai-Chien Huan[1] Khai Lip Ng[1] Teng-Shin Khoo[2] Yean-Chen Lai[2]

[1] *Pulmonology Department, Serdang Hospital, Selangor, Malaysia*

[2] *Department of Medicine, Labuan Hospital, Federal Territory of Labuan, Malaysia*

Introduction

Haemoptysis is a common clinical encounter in primary care settings. While there are multiple causes of haemoptysis, most are related to infection, neoplasm and vascular/structural abnormalities. In this case series, we present 3 uncommon causes of haemoptysis in each domain as mentioned above.

Case 1 ('infection')

A 41-year-old gentleman with diabetes mellitus was admitted with a 2-week history of fever, cough and haemoptysis. During his stay he developed massive haemoptysis (~250mL) requiring admission to intensive care unit for oxygen support. Computed tomography (CT) of the thorax demonstrated necrotizing right lower lobe pneumonia and multiple splenic collections. *Burkdohiera Pseudomallei* was isolated from peripheral blood cultures. He responded well with intravenous meropenem and was discharged with oral trimethoprim/sulphamethoxazole.

Case 2 ('neoplasm')

A 50-year-old gentleman presented with complaints of recurrent haemoptysis for the past 2 months. CT scan demonstrated left lower lobe sub-segmental collapse due to an endobronchial lesion, raising concerns of malignancy. Subsequent bronchoscopy revealed a total occlusion of left lower lobe segment 8 by a polypoid mass. Endobronchial biopsy results were consistent with harmatoma without sarcomatous transformation.

Case 3 ('structural')

A 40-year-old lady presented with a 6-month history of recurrent haemoptysis. Initial assessment and blood parameters were normal. CT thorax showed sharply demarcated areas of fluid filled cystic lesions over segments of right upper and lower lobes, suggestive of pulmonary congenital cystic adenomatoid malformation (CCAM). A bronchoscopy conducted to look for any possible intraluminal causes of haemoptysis were unremarkable. She was offered evaluation for potential surgical treatment in which she declined. Fortunately, she remained well on outpatient clinic follow-ups.

Discussion and conclusion

Melioidosis, endobronchial harmatoma and CCAM are examples of rare causes of haemoptysis, which itself is an alarming symptom to both clinicians and patients. A good knowledge on causes of haemoptysis, including rare aetiologies is vital to secure a correct diagnosis, prevent unnecessary investigations and to ensure a better clinical outcome.

CR32

ACUTE AND ACCELERATED SILICOSIS: TWO CASE REPORTS

Mohd Faizul Abu Samah, Suat Yee Lim, Sin Nee Tan, Lalitha Perierasamy, Umadevi A. Muthukumaru, Irfhan Ali Hyder Ali
Department of Respiratory Hospital Pulau Pinang, Pulau Pinang, Malaysia

Silicosis is one of the earliest recorded occupational lung diseases, known since the time of the ancient Egypt and Greek. It refers to a spectrum of pulmonary diseases caused by inhalation of free crystalline silicon dioxide or silica. Diagnosis is based on clinical history of silica exposure and radiological findings. The clinical presentations are of three types: acute, accelerated and chronic silicosis. In this case reports, we present two patients diagnosed with acute silicosis and accelerated silicosis.

Two male patients aged 26 and 27 years old presented to us complaining of chronic cough for years and worsening shortness of breath on exertion. Both patients were non-smoker and worked in the same silicon processing company for the past 6 to 7 years. Pulmonary TB work up for both patients were negative. The first case, the 26 years old patient, his chest radiograph and HRCT thorax showed numerous small bilateral lung nodules predominantly in the upper lobe with egg shell calcification seen in the mediastinal lymph nodes. He underwent surgical pulmonary biopsy and the HPE consistent with silicosis description. He was diagnosed with acute silicosis. The second case, the 27 years old patient, his chest radiograph and HRCT thorax showed conglomerate masses bilateral upper lobe with septal thickening and ground glass opacity bilateral lung field. His spirometry revealed a restrictive lung disease. He was diagnosed with accelerated silicosis.

These two cases are being written because such cases were rarely reported. With many occupations in this country that expose people to significant silica dust, we would expect many silicosis cases were notified and reported. However, that not the case. This may be due to lack of awareness, clinical suspicion and confidence among doctor regarding the disease. Currently the mainstay of the treatment is to prevent further exposure as there is no proven treatment to date. Hence early detection and prevention is crucial. Hopefully these cases would remind us of silicosis, the forgotten ancient disease.

CR33

ATYPICAL PRESENTATION OF SEVERE MELIOIDOSIS IN A YOUNG INFANT

Shih Ying H'ng[1], Kah Peng Eg[2], Siti Hajar Tubirin[1], Guo Wai Wong[2], Anna Marie Nathan[2], Jessie de Bruyne[1]

[1]*University of Malaya Medical Centre, Kuala Lumpur, Malaysia*

[2]*University of Malaya, Kuala Lumpur, Malaysia*

Introduction:

Melioidosis is an uncommon but potentially fatal community-acquired infection in children.

Case Report:

A previously well 3-month-old infant presented with fever for eight days. He had no respiratory or other localizing symptoms, and his examination was unremarkable. Initial chest x-ray (CXR) was normal. Blood tests revealed a raised total white cell count of 28.2 X 10^9/L with neutrophilia and C-reactive protein of 63mg/L. He was diagnosed with meningitis and started on C-penicillin and cefotaxime. His blood, urine and cerebral spinal fluid cultures were negative. However, despite one week of treatment, his fever persisted. Antibiotics were subsequently changed to meropenem and the fever resolved temporarily but recurred 9 days later. Serial blood cultures remained sterile but inflammatory markers continued to rise. After nearly 3 weeks of hospitalization, the child developed cough with lung signs. Repeat CXR showed a right lower lobe ring enhancing lesion and left lower lobe consolidation. A contrast chest CT showed bilateral necrotizing pneumonia with multiple lung and splenic abscesses. CT-guided aspiration of the right lung abscess grew *Burkholderia pseudomallei.* He subsequently developed respiratory distress requiring invasive ventilation for a week. Antibiotics were changed to ceftazidime and cotrimoxazole and his fever settled three days later. Investigation for primary immunodeficiency was normal. He was discharged well after 2 months of hospital stay with a prolonged course of oral cotrimoxazole. During follow up, radiological investigations showed resolution of the abscesses.

Conclusion:

Severe melioidosis can present without localizing symptoms and signs. A concerted effort to arrive at a diagnosis should be made in the presence of unresolving fever despite apparently appropriate treatment.

CR34

GIANT INTRAPULMONARY SOLITARY FIBROUS TUMOUR

Tan HX, Kew YC, Shivaanand L, Kumaresh L, Lam yf
Hospital Raja Pemaisuri Bainun, Ipoh, Malaysia

Solitary Fibrous Tumour(SFT) are a rare form of mesenchymal spindle cell tumour that is commonly seen in the visceral pleura. These tumours comprises of 5% of pleural tumours & 2% of all soft tissue tumours. They are commonly described as benign tumours that can mimic a malignant behaviour but rarely metastasize. The mainstay of treatment is complete surgical resection. Studies have shown extremely optimistic survival rates for pleural SFTs with a 10 to 25% of recurrence.

Case report: A 47-year-old non-smoker lady presented to us with an intermittent episode of cough with left sided pleuritic chest pain. It was associated with slow progression of dyspnea, anorexia, and loss of weight for one month. Chest x-ray showed a well-defined opacity over the left middle zone. CT thorax revealed left lung mass with no nodal nor distant metastasis. Patient underwent CT-guided biopsy which revealed a solitary fibrous tumour. Subsequently, thoracotomy and debulking of the tumour weighing 3kg was successfully performed. The patient remained well and asymptomatic 2 years post-operation, with no recurrence.

CR35

ASPIRATION SYNDROMES AND BRONCHIECTASIS: A CASE REPORT AND REVIEW OF LITERATURE

Nai-Chien Huan[1], Khai-Lip Ng[1], Siti Nabihah Mohamed Hatta[1], Cheong Han Goh[1], Mohamad Khairul Ikram Zainuddin[1], Jamalul Azizi Abdul Rahaman[1]

1. Pulmonology Department, Hospital Serdang, Selangor, Malaysia

Introduction

Bronchiectasis due to aspiration syndromes can occur in the context of multiple disease entities, including gastroesophageal reflux, hiatal hernia, achalasia, tracheoesophageal fistula and neurological diseases leading to impairment in swallowing reflex. In this case report, we present a patient with primary achalasia who was subsequently found to have bronchiectasis.

Case Report

A 44-year-old lady who was diagnosed with primary achalasia for the past 14 years was referred to a pulmonology outpatient clinic complaining of chronic productive cough of more than 6 months. Physical examination revealed course crepitations on both lung fields but were more pronounced on the right side. Her full blood count, blood glucose levels, infective screening and tuberculosis workup were normal or unremarkable but computed tomography (CT) of thorax revealed cystic and varicose bronchiectasis affecting right upper, middle and lower lobes as well as left upper lobe. Bronchoscopy demonstrated dilated airways on the right side. She was commenced on intense anti-reflux therapy together with chest physiotherapy sessions and immunisations. Her achalasia was managed with repeated pneumatic balloon dilatations.

Discussion and Conclusion

The relationship between bronchiectasis and aspiration syndromes might be two sided. Aspiration or reflux might be: (1) caused by the underlying lung disease itself, (2) be part of a systemic disease (e.g. systemic sclerosis), (3) directly causing the lung disease (as per our case), or (4) be an unimportant bystander. Bronchiectasis due to aspiration should especially be considered in the setting of oesophageal or gastric abnormalities (e.g. oesophageal dilatation or hiatal hernia) as well as presence of dependent airway changes (i.e. right sided more affected or lower lobes more diseased) on clinical findings and imaging. Treatment of the underlying cause coupled with intense anti-reflux therapy as well as surgery or endoscopy in selected cases remain the mainstay of management of this condition.

CR36

A CASE REPORT OF COEXISTING ACTIVE PULMONARY TUBERCULOSIS AND ESOPHAGEAL SQUAMOUS CELL CARCINOMA

Noor Izyani Zakaria[1], Cheng Yi Zhi[2], Muhammad Amin Ibrahim[3], Mohd Arif Mohd Zin[4]

1. Selayang Hospital, Selangor, Malaysia

2. Universiti Teknologi Mara, Selangor, Malaysia

Introduction:

Tuberculosis (TB) and malignancy are common diseases worldwide. One of the most common reported malignancy associated with TB is lung cancer. It is because both diseases share common risk factors, clinical manifestations and chronic inflammation in the lungs. However here, we report an uncommon case report of active pulmonary TB co-existing with oesophageal squamous cell carcinoma in a patient.

Case Report:

A 45-year-old Aborigine gentleman, with no comorbid condition, presented with cough, hemoptysis, constitutional symptoms and hoarseness of voice for 1 month and dysphagia for 2 weeks. Chest radiograph showed linear opacity on the left lung and right pleural effusion. His sputum Acid Fast Bacilli (AFB) smear using fluorescence method was positive – 10 AFB seen per 1 length. Subsequently he had worsening dysphagia and dyspnea especially while lying flat. His anti-tuberculous medications had to be administered intravenously instead. Flexible nasopharyngolaryngoscopy revealed left vocal fold palsy but no mass was visualised. Nasogastric tube was unable to pass through due to resistance at the laryngeal level. Oesophagogastroduodenoscopy (OGDS) demonstrated fungating oesophageal mass 25cm from incisura with contact bleeding. Biopsy from the oesophageal mass showed squamous cell carcinoma. With these, his diagnosis was concluded as active pulmonary tuberculosis with esophageal squamous cell carcinoma.

Discussion:

Active pulmonary tuberculosis and esophageal squamous cell carcinoma not commonly reported as coexisting diseases. The relationship and pathophysiology between TB and malignancy becomes more challenging to be clarified. Few theories have been discussed. In general, chronic inflammatory conditions have been thought to create the appropriate microenvironment for malignancy development.
Other than that, low immunity status in cancer patients might lead to active tuberculosis.

Conclusions:

In conclusion, as clinician, we need to be aware and always have high index of suspicion of simultaneous manifestation of TB and cancer. In addition, further research is required to determine if tuberculous infection may facilitate carcinogenesis.

CR37

UNILATERAL CONGENITAL DIAPHRAGMATIC EVENTRATION MIMICKING CONGENITAL DIAPHRAGMATIC HERNIA

Hafiz Ab[1], *LC Tan*[1], *SS Chua*[1], *Noraini AR*[1], *M.J. Hanifah*[1], *Ruzaimi Noor*[2], *M.R. Hassan*[2], *M.N. Tarmizi*[2]

[1]*Hospital Sultan Ismail Petra, Kuala Krai, Kelantan.*

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

Introduction:

Congenital diaphragmatic eventration (CDE) is a very rare congenital anomaly where all or part of the diaphragmatic muscle is replaced with fibroelastic tissue. It is also associated with other chest deformities. However, the clinical features of respiratory distress and chest imaging could mimic congenital diaphragmatic hernia (CDH). Sometimes, the diagnosis is established intraoperatively.

Objective:

To study the importance of differentiating CDE from CDH.

Methodology:

A case report of a full-term newborn with underlying CDE but had clinical features and chest imaging which mimicking CDH.

Results:

We report a case of a baby with unilateral cleft lip who developed severe respiratory distress at birth and required intubation. She developed persistent pulmonary hypertension of newborn. The left hemidiaphragm appeared elevated with splenic shadow projected over the left hemithorax on the chest imaging. Bedside ultrasound was unable to exclude left CDH. However, she responded well to the standard treatment. She was extubated at day 5 and tolerated feeding well but continued to have persistent mild respiratory distress requiring nasal prong oxygen therapy. Computed tomography (CT) scan revealed eventration of left hemidiaphragm with underlying pectus excavatum. Successful thoracoscopic left diaphragmatic plication was performed on day 22 of life resulted in a complete resolution of the symptoms.

Conclusion:

Congenital diaphragmatic eventration is a rare entity which can mimic congenital diaphragmatic hernia. A high index of clinical suspicion with the aid of imaging can help with the diagnosis. An accurate diagnosis preoperatively is very crucial in deciding the surgical intervention.

CR38

A CASE SERIES OF YOUNG BRONCHIECTASIS: PRIMARY IMMUNODEFICIENCY DISEASE IN LUNG

[1]**Farah Ruwaida FR**, Munirah M, Nor Suraya S, Fatimah Azmah M, Syazatul Syakirin SA.
Institute of Respiratory Medicine, Malaysia

A variation of clinical presentation across various age categories are presented, which adults differ distinctly over children. Primary immunodeficiency diseases (PID) raises pulmonary complications that lead to morbidity and mortality. Observations show that complications from lower respiratory tract are more significant in determining patients' prognosis. In most cases, lack of awareness greatly affect the patients' conditions, which further justifies the importance of proactive diagnosis to slow down the development and course of respiratory complications of PIDs. This case series highlights 4 different patients at Institute of Respiratory Medicine, Malaysia, reporting their characteristics, laboratory findings, and outcomes in patients with both PIDs with lung complications.

CR39

PERICARDIAL EFFUSION AS THE INITIAL PRESENTATION IN YOUNG PATIENTS WITH LUNG ADENOCARCINOMA

Han Loong Tan[1], Mohd Hasnul Helmi Zulkifli[2], Aisya Natasya Musa[2], Muhammad Amin Ibrahim[2], Mohd Arif Mohd Zin[2]

1. Department of Internal Medicine, Selayang Hospital, Selangor, Malaysia

2. Faculty of Medicine Sungai Buloh, Universiti Teknologi MARA (UiTM), Selangor, Malaysia

Introduction

70% of NSCLC are diagnosed with advance stage upon presentation[1]. Adenocarcinoma is the commonest subtype and it tends to occur in the lung periphery[2]. We report 2 cases of young women presented with centrally located lung mass and pericardial effusion, proven to be stage IV lung adenocarcinoma.

Case Reports

Case 1: 33 year-old lady, was diagnosed as stage IV lung adenocarcinoma (T4N3M1c) when she presented with chronic cough, associated with anterior neck swelling, shortness of breath and pleuritic chest pain. CT thorax showed right hilar and lung mass with cervical and mediastinal lymphadenopathy. Echocardiogram revealed global pericardial effusion and pericardial fluid cytology confirmed malignant cells positive for CK7, TTF-1 and napsin A suggestive of lung adenocarcinoma. Right cervical lymph nodes biopsy yielded 92% ROS1 gene rearrangement and PD-L1 Tumour proportion score of 80%

Case 2: A 33 year-old lady, presented with productive cough, pleuritic chest pain and constitutional symptoms. A CT pulmonary angiogram ruled out pulmonary embolism, but revealed a gross pericardial effusion and a lobulated mass measuring 3.7 x 3.3 x 3.6cm at the right middle lobe of the lung. Pericardiocentesis drained hemorrhagic fluid and the lung biopsy confirmed lung adenocarcinoma with positive EGFR mutation.

Both patients were referred to oncologist and due to start their targeted therapy.

Discussion

Lung carcinoma among patients < 40 years is rare with adenocarcinoma being the commonest histology subtype. Malignant pericardial effusion can be a rare presentation of primary NSCLC (up to 24% of all malignant pericardial effusion)[3] and indicates poor prognosis. However, identifying the driver gene mutation and PD-L1 expression will help in prognostication of the patient[4] and guide further targeted therapies or immunotherapy.

Conclusion

Pericardial effusion is a rare presentation of lung adenocarcinoma and our case series have highlight the importance of driver mutations in these patients.