ICPaLM 2021: International Congress of Pathology and Laboratory Medicine 2021 and 18th Annual Scientific Meeting, College of Pathologists: Exploring the Advances and Potential of Disruptive Technologies in Pathology and Laboratory Medicine, organised by the College of Pathologists, Academy of Medicine of Malaysia and held virtually on 3rd-5th March 2021. Abstracts of K. Prathap memorial lecture, plenary, symposium and paper (poster) presented are as follows:

K. Prathap Memorial Lecture: Exploring Advances and The Potential of Disruptive Technologies in Pathology and Laboratory Medicine

Jo Martin
Queen Mary University of London, Barts Health NHS Trust

Rapid advances in technology are impacting all areas of pathology. Over the next few years we can expect to see even more amazing things come into our world and into our practice. Both the technology that we use and the ways in which we deploy it will change the way we work. We have glimpses of advances that will change the way we assess histological slides, and the data science tools are being developed that will allow us to provide personalised reports of therapeutic options for tumours.

Integrative pathology, with the use of genetic and protein data alongside morphological interpretation, will come into every area of our practice, both benign and malignant. This presentation will highlight some of the new methods that are under development, some of the new tools becoming available and some of the changes that we can expect both in coming years and the longer term.

Plenary 2: Role of Molecular Genetic and Immunohistochemistry in Renal Neoplasms

Brett Delahunt
Wellington School of Medicine and Health Sciences, University of Otago, Wellington, New Zealand

There have been major advances in the classification of renal cell neoplasia since the publication of the first classification by the World Health Organization (WHO) in 1981 and while the diagnostic emphasis has been on morphological features, the role of molecular genetics (MG) and immunohistochemistry (IH) is increasing. The Mainz Classification in 1986 established clear cell renal cell carcinoma (RCC), papillary RCC, chromophobe RCC and collecting duct carcinoma as distinctive tumor morphotypes, with renal medullary carcinoma later being added as a separate subtype of collecting duct carcinoma. It was also concluded that sarcomatoid RCC represented an extreme form of tumor dedifferentiation rather than a separate morphotype. Mucinous tubular and spindle RCC and translocation carcinomas were added to the classification in 2004 and here the role of IH and MG took on a new prominence. The Vancouver Classification of 2012 added tubulocystic RCC, acquired cystic disease-associated RCC, clear cell (tubulo) papillary RCC and hereditary leiomyomatosis RCC syndrome-associated RCC to the spectrum of RCC. Two further entities were also recognized. Hybrid oncocytic chromophobe tumor was classified as a variant of chromophobe RCC, while t(6;11) translocation carcinoma was added to the group of translocation carcinomas. In addition to these, three newly recognized morphotypes of RCC (thyroid-like follicular RCC, succinate dehydrogenase B deficiency-associated RCC and ALK-translocation RCC) were classified as emerging entities, emphasizing the increasing diagnostic role of IH. More recently eosinophilic solid and cystic RCC and biphasic papillary RCC have also been recognized as novel tumors with characteristic IH features.

Plenary 3: Using Autopsy Data – More Can Be Done

Philip Beh
Department of Pathology, Li Ka Shing Faculty of Medicine, The University of Hong Kong

Despite declining trends and numbers of autopsies throughout the world, large numbers of autopsies are still being performed annually. Findings from such autopsies are compiled in reports and frequently filed away with little attention given to the rich amount of information that can be obtained from such a large database of information. This presentation is a humble description of my personal journey and I hope an encouragement to the audience to think about the possibilities available to them and the opportunities to enrich knowledge and to prevent injuries and death.

MM13 Disseminated cryptococcosis with hepatitis in a systemic lupus erythematosus patient: a diagnostic challenge

Najihan Abdul Samat Muttaqillah, Mohd Zaki Mohd Zaili, Chuan Hun Ding, Asrul Abdul Wahab
Department of Medical Microbiology & Immunology, Faculty of Medicine, Universiti Kebangsaan Malaysia Medical Centre, Kuala Lumpur, Malaysia

Introduction: Hepatitis is an uncommon presentation of disseminated cryptococcal infection among systemic lupus erythematosus (SLE) patients, and can be masked by hepatitis due to SLE itself or concurrent autoimmune hepatitis (AIH). *Case report*: A 34-year-old woman with past hepatitis B infection and newly diagnosed SLE on oral prednisolone since one month ago presented with fever and jaundice, and was suspected to have AIH. Blood investigations revealed elevated white cell count, C-reactive protein, alkaline phosphatase, alanine transferase, bilirubin, IgA, IgG and IgM levels. Her C3 and C4 levels were low, anti-mitochondrial and anti-smooth muscle antibodies were negative. Hepatitis B viral load was <20 IU/mL. Initial blood cultures were negative. Chest X-ray showed bilateral perihilar haziness with bilateral pleural effusion. Liver ultrasound showed hepatomegaly with no biliary obstruction. She was empirically treated with antibiotics for pneumonia and was also started on intravenous immunoglobulin and methylprednisolone. *Cryptococcus neoformans* was isolated from a repeated blood culture a week later. The cerebrospinal fluid culture was negative. A liver biopsy performed after completing a 14-day course of intravenous amphotericin B did not show any features of AIH, and her clinical condition improved with the antifungal treatment. *Discussion*: We postulate the hepatitis to be secondary to disseminated cryptococcal infection despite lacking of evidence on liver biopsy, most likely due to a response towards amphotericin B. A reactivation of hepatitis B was also unlikely due to a low viral load. Distinguishing hepatitis due to a cryptococcal infection is challenging in an SLE patient, especially in the presence of possible hepatitis B reactivation, and warrants diagnostic vigilance.

MM14 Antimicrobial susceptibility of bacteria isolated from various clinical specimens in a private hospital in Kuching – A retrospective study

Siow-Phing Tay[1], Jin-Shyan Wong[2], Aldryn Banyie Baja[1], Nur Amira Azizul Hisham[1], Siti Nur Adibah Zawawi[1], Vidyaa Shree Shanmugha Sundar[1], Henry Rantai Gudum[1]
[1]Faculty of Medicine and Health Sciences, Universiti Malaysia Sarawak, Malaysia; [2]Borneo Medical Centre, Kuching, Sarawak, Malaysia.

Introduction: Antimicrobial resistance is an emerging global health problem that impacts the quality of patient care. Bacterial spectrum and antimicrobial susceptibility vary among countries and regions. Selection of empirical antibiotic therapy should be guided by local microbial profile and antimicrobial susceptibility pattern. This retrospective study was conducted at Borneo Medical Centre in Sarawak to determine the profile of bacteria isolated from various clinical specimens with their antibiotic susceptibility patterns. *Materials & Methods:* All the clinical specimens for bacterial culture and sensitivity from January to December 2018 were included in this study. Clinical and laboratory data were extracted from the hospital digital database. *Results:* There were 2728 specimens of which 31.3% yielded positive cultures. Most frequently isolated gram-positive bacteria were *Staphylococcus spp.* (19.8%), *Streptococcus spp.* (5.9%) and *Enterococcus spp.* (3.9%); gram-negative bacteria were *Escherichia coli* (20.4%), *Pseudomonas spp.* (12.8%) and *Klebsiella spp.* (11.3%). *E. coli* was most commonly isolated from urine and blood. *Klebsiella spp.* and *Staphylococcus aureus* were most isolated from sputum and wound, respectively. Ceftriaxone was sensitive against *Klebsiella spp.* (94.9%), *E. coli* (86.0%) and *Pseudomonas spp.* (50.0%). Ceftazidime was sensitive against *Pseudomonas spp.* (94.3%), *Klebsiella spp.* (91.3%) and *E. coli* (86.4%). *S. aureus* and *Streptococcus spp.* showed 100% sensitivity to vancomycin. *Discussion:* Resistance rate of gram-negative bacteria to third generation cephalosporins was low (15.2%). Rates of MRSA (4.1%) and ESBL producing bacteria (1.9%) were also low.

MM15 Laboratory exposure to *Brucella* in a tertiary center – The experience and challenges

Aliah Abdul Rahman[1,2], Jayamalar Pitchaimuthu[3], Roshalina Rosli[1], Sahlawati Mustakim[1], Syafinaz Amin Nordin[2]
[1]Microbiology Unit, Pathology Department. Hospital Tengku Ampuan Rahimah Klang, Selangor, Malaysia; [2]Department of Medical Microbiology and Parasitology, Universiti Putra Malaysia, Serdang, Selangor, Malaysia; [3]Department of Medical Microbiology and Parasitology, University of Malaya, Kuala Lumpur, Wilayah Persekutuan, Malaysia

Introduction: Brucellosis is one of the commonest causes of zoonotic infection and of laboratory transmitted infections worldwide. It is easily transmissible through aerosolization especially during sample handling and colony manipulation by laboratory personnel. *Case report:* We report our experience and challenges in managing the first laboratory exposure to *Brucella spp.* in a busy diagnostic laboratory in a tertiary hospital. The case was a young boy who was admitted for prolonged fever. No history was indicative of brucellosis. Blood culture was positive on day 3 of incubation, on gram stain revealed gram-negative coccobacilli, and grew pure slow-growing tiny translucent colonies on 5% sheep blood agar and chocolate agar. All tests were performed on the open workbench. Colonies sent to a reference laboratory confirmed *Brucella spp.* by PCR method. The exposure to *Brucella spp.* among microbiology laboratory staff occurred during handling and manipulation of the patient's samples and the colonies that grew, due to inadequate history provided to the laboratory and the difficulties in identifying the organism. *Discussion:* This exposure led to a review and amendment of the laboratory work instructions and work etiquette, including usage of biosafety cabinets in handling blood cultures. Staff were given training on the organism. Exposed staff were required to undergo serological monitoring and high-risk exposures were advised to take post exposure prophylaxis. The diagnosis of