to a NZ hospital with a diagnosis of viral illness. He was re-admitted 3 days later due to increased respiratory distress. Examination revealed tachypnoea and wheezing, but the chest was clear on x-ray. The initial two blood cultures detected no growth. Trans-oesophageal echocardiogram showed severe bulky vegetations on the right side of the heart and pacing leads. Urgent surgery was performed and specimens were sent to the laboratory.

Microbiology: The specimens, which showed septate hyphae on Calcofluor white stain, were sent for fungal culture. Voriconazole was given for the suspected *Aspergillus* endocarditis. Phenotypic features and DNA-nucleotide sequencing of the isolate confirmed the diagnosis of *Microascus cinereus* endocarditis.

Discussion: Fungal endocarditis needs to be considered in culture-negative infective endocarditis patients with no response to antimicrobial therapy. Antifungal susceptibility testing is important in choosing the appropriate antifungal treatment.

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A REVIEW AND COMPARISON OF TWO COMMERCIAL MOLECULAR METHODS FOR DETECTION OF RESPIRATORY VIRUSES IN A NEW TERTIARY HOSPITAL IN PERTH

Eric Chu, Tristan Gibbs, Todd Pryce, Rebecca Wake, Jo Montgomery, Ian Kay

Pathwest Laboratory, Fiona Stanley Hospital, WA, Australia

Aim: To evaluate the test performance and clinical utility of the GeneXpert flu/RSV XC (GX) and Filmarray Respiratory panel (FRP) for the rapid detection of respiratory viruses.

Methods: Between June and October 2015, samples were tested for influenza A, influenza B and RSV at PathWest FSH using GX, FRP and our routine method (RM), an in-house real-time multiplex PCR performed at Pathwest QEII laboratory. Sensitivity and specificity for the GX and FRP was compared to RM. In addition mean test turnaround time (MTT) was determined for GX and RM.

Results: GX tested samples ($n=54$) demonstrated a 95% sensitivity and 100% specificity with a MTT of 3.66 h [interquartile range (IQR)=2.42–10.02 h] compared to 66.21 h (IQR=47.83–93.96 h) ($p \leq 0.001$) for RM. FRP ($n=34$) demonstrated a 92.86% sensitivity and 100% specificity compared to RM. MTT was not assessed for FRP. RM and FRP were able to detect additional respiratory pathogens.

Conclusion: The sensitivity and specificity of both commercial methods were similar. The MTT for GX was significantly shorter than RM. FRP and RM have the advantage of detecting a broader range of pathogens than the GX. Cost effectiveness should be assessed and these tests may provide improved outcome for patients in our hospital.

RESPIRATORY VIRAL DETECTION IN PRIMARY HEALTH CARE SETTING IN REGIONAL NSW (ILLAWARRA REGION)

Shujuan Deng, Kyu Naing, Wiley Mathis, Michael Fox

Southern IML Pathology (Sonic), Wollongong, NSW, Australia

Objective: The aim of this study is to identify the incidence of respiratory viral infection with emphasis on co-infection in different age groups and seasons in primary health care setting.

Methods: The study included 1898 patients from 26 days to 96 years old presented with influenza-like illness from 04/2014 to 09/2015. Respiratory samples were analysed by Seegene Anyplex Respiratory PCR assay.

Results: Of the 1898 respiratory samples tested, 745 (39.25%) were positive, 664 (89.13%) were mono-infections, whereas 81 (10.87%) were multiple infections. Influenza A and B detection was 260 (39.16%). The non-influenza virus detection was 404 (60.84%). Rhinovirus is the highest detected virus in children under 5. Influenza A and B detection is the highest in 6–60 years. Children under 2 have highest co-infection rate of 34.65%. Among co-infections, rhinovirus and bocavirus were the most frequently detected viruses. Respiratory virus detection peaked in winter.

Conclusion: Influenza-like illnesses can be attributed to a wide range of respiratory viruses, including seasonal A and B influenza viruses. Influenza can be clinically indistinguishable from diseases caused by other respiratory viruses, such as the common cold. This study demonstrates incidence of the most common respiratory virus and co-infection in different age groups and seasons in primary health care setting in Illawarra Region. This study will provide epidemiological data for effective prevention and therapeutic strategies for respiratory virus infections.

TATLOCKIA MACEACHERNII ENDOCARDITIS DIAGNOSED ON 16S rRNA SEQUENCING OF EXPLANTED AORTIC VALVE TISSUE

Caitlin Keighley^{1,2}, Jonathan Emerson¹, Sharon Chen^{1,3}, Don Packham^{1,2}

¹Center for Infectious Diseases and Microbiology, Westmead Hospital, ²Department of Medicine, University of Sydney, and ³Institute for Clinical Pathology and Medical Research (ICPMR), Westmead Hospital, Sydney, NSW, Australia

Introduction: Legionella is a rare cause of endocarditis. We report a case of *Tatlockia maceachernii*, formerly *Legionella maceachernii*, prosthetic aortic valve endocarditis diagnosed by 16S rRNA sequencing of valve tissue.

Case report: A 53-year-old male navy engineer presented with fevers over two months. He had undergone a porcine aortic valve replacement (AVR) 15 years earlier. Recent history included a dental procedure three months prior, and a haemorrhoidectomy two months prior. The temperature was 38.1°C, the CRP 26 g/L and 6 sets of blood cultures were negative. A transoesophageal echocardiogram demonstrated two vegetations on the AVR of 7×2 mm and 7×3 mm with a small perforation but preserved valve function. Bartonella, brucella, legionella, Q fever and HIV serology were negative. The fever persisted despite 12 days of ceftriaxone, vancomycin and gentamicin prompting replacement of his AVR. 16S rRNA analysis revealed *Tatlockia maceachernii* on the explanted tissue. He received oral moxifloxacin 400 mg daily and azithromycin 500 mg daily for 3 months with resultant cure.

Conclusions: The diagnosis of a rare cause of endocarditis was made after early aortic valve replacement and 16S rRNA sequencing on explanted tissue, enabling effective therapy of *Tatlockia maceachernii* prosthetic aortic valve endocarditis.