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Strep throat or sore throat: Towards good antibiotic appropriateness practices among general practitioners

Statement of the Problem: The rate and variety of antibiotic resistance has been increasing in recent years. Sore throat or Acute Pharyngitis (AP) is the most common reason for primary care consultations globally. Despite viruses being the major etiological agent in AP, antibiotics are commonly prescribed by General Practitioners (GPs). Together with other resistance-acquisition pressures such as antibiotics in agricultural practices, inappropriate- or over-prescription of antibiotics has been a long-standing issue, particularly in primary care, which may risk the rise of antibiotic-resistant bacteria among the general community. From a Malaysian perspective, combating this growing problem requires the implementation of primary healthcare policies.

Methodology: GPs were recruited as patient samplers and given questionnaires on their diagnosis of AP among patients and antibiotic prescription practices. Throat swabs and patient questionnaires on antibiotic were collected from 205 patients diagnosed with AP from private clinics around the Klang Valley in Malaysia for viral nucleic acid isolation and bacterial culture. Reverse-transcription real-time PCR (qRT-PCR) was performed on the viral nucleic acids to detect the presence of four human respiratory viruses (adenovirus, rhinovirus, Influenza A and enterovirus) using virus-specific fluorescent hydrolysis probe chemistry. Single isolates of bacteria cultured on blood agar were screened for GABHS using Matrix-Assisted Laser Desorption/Ionization-Time of Flight Mass Spectrometry (MALDI-TOF MS). Selected species were subjected to antibiotic-resistance screening.

Results & Conclusion: There appears to be over-prescription of antibiotics for a condition that is mainly viral in etiology. This viral etiology is supported in our study and is strengthened by the finding that most of these patients had low McIsaac scores. As such, the simple and zero-cost McIsaac score is a good predictor of viral pharyngitis. It would be prudent for healthcare professionals to utilize this scoring system as a first-line tool in viral or bacterial AP diagnosis to reduce antibiotic over-prescription.

Biography

Crystale Siew Ying Lim is currently an Associate Professor at UCSI University, Faculty of Applied Sciences. She is also the Vice President of the Malaysian Society of Molecular Biology and Biotechnology (MSMBB). She has received BSc in Biomedical Sciences (2005) and a PhD in Molecular Medicine (2010), both from the Faculty of Medicine and Health Sciences, University of Putra Malaysia (UPM). She is a recipient of the John David Williams Memorial Award from the International Society of Chemotherapy in 2013 and is active in science education among schoolchildren. Currently, she is interested in antibiotic resistance in the general community and is the team leader of a project under the Antibiotics Resistance Awareness Stewardship of Malaysia to study antibiotic appropriateness in the private primary care setting.

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