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Session P580 - AAR01 - Global Surveillance of Antimicrobial Resistance: Clinical and Mole...

Itinerary

SUNDAY - AAR-542 / SUNDAY - AAR-542 -

Spectrum and Antibiotic Susceptibility Pattern of Bacterial Pathogens Isolated from Cancer Patients Who Were on Empirical Antibiotic Therapy at a Tertiary Care Institute, Sri Lanka

June 23, 2019, 10:30 AM - 4:00 PM

Exhibit and Poster Hall

Presentation Time 1:

11 am-1 pm

Presentation Time 2:

Not Applicable

Authors

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Disclosures

G. Chathuranga: None. **T. Dissanayake:** None. **N. Fernando:** None. **C. Wanigatunge:** None.

Abstract

Infectious diseases are a major cause of increased morbidity and mortality among patients with malignancies. Malignancy and its treatment can cause immunosuppression leading to infection. Frequent hospitalizations predispose patients to nosocomial infections with multi-drug resistant organisms. This study was carried out to determine the spectrum and the antibiotic susceptibility pattern of the bacterial pathogens causing lower respiratory tract (LRTI), urinary tract (UTI) and skin and soft tissue (SSTI) infections among cancer patients who continued to have symptoms despite the administration of empirical antibiotics. 105 patients were included in the study from May, 2018 to November, 2018 at the National Cancer Institute, Sri Lanka. Of the 105 patients, 41.9% (44/105) had solid organ malignancies while 58.1% (61/105) had hematological malignancies. LRTI were predominant in this population (39%, 41/105) followed by UTI (32.4%, 34/105) and SSTI (28.6%, 30/105).

Klebsiella pneumoniae was the most frequently isolated pathogen from LRTI (53.7%, 22/41) whereas *Escherichia coli* (35.3%, 12/34) and *Staphylococcus aureus* (33.3%, 10/30) predominated in UTI and SSTI respectively. Overall, *K. pneumoniae* accounted for majority of cases in all 3 types of infections (34.3%, 36/105). Prevalence of *MRSA* was 68.8% (11/16) in this study. Of the 4 *Enterococcus spp* isolated from UTI, 3 were resistant to vancomycin (VRE). Five (12.2%, 5/41) multidrug resistant *Acinetobacter spp* were isolated from LRTI. Enterobacteriaceae isolated from all 3 types of infections showed the highest resistance to amoxicillin-clavulanic acid (1.6%, 1/64) while the lowest resistance was observed for amikacin (60.9%, 39/64). Carbapenem resistance among enterobacteriaceae was 46.9% (30/64). Meropenem was the drug of choice for empirical therapy in LRTI (36.5%, 15/41) while it was ceftazidime for UTI (47.1%, 16/34). Ceftazidime, meropenem and cefuroxime were given to an equal number of patients (16.7%, 5/30) in SSTI. The isolated pathogen in 52.4% (55/105) of the patients was resistant to the empirically administered antibiotic. In 24.8% (26/105) of the cases, the administered empirical antibiotic did not have the spectrum of activity for the pathogenic bacteria. According to these findings, the main reason for persistent infection despite the empirical antimicrobial therapy is the antibiotic resistance of the organisms. Modification of empirical treatment guidelines may help in solving this problem.