

OP 15: Antibiotic Prescription and Resistant Pattern in Wards of Professorial Unit and Intensive Care Unit of Colombo North Teaching Hospital

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Introduction: Antibiotic resistance is a global issue and increasingly reported in the health care setting of Sri Lanka. Moreover, there is evidence to support unnecessary usage of antibiotics resulting in development of resistance.

Objectives: To evaluate the prescription of five specific antibiotics (ciprofloxacin, cefuroxime, cefotaxime, meropenem, co-amoxiclav) in the professorial medicine, pediatric, surgical ward, intensive care units and orthopaedics ward and to assess the development of resistance to those antibiotics over a 6-month period (January 2019 to June 2019).

Methods: This is a descriptive cross-sectional study conducted from 1st of January to 30th of June 2019. Number of prescribed antibiotics for 5 antibiotics (from the inward drug registry) and culture samples recorded as resistance for those antibiotics (from antibiotic sensitivity test registry in Microbiology laboratory) in the above units were taken as the study population. Descriptive statistics was used to analyse the results.

Results: According to the results co-amoxiclav (43%) is the highest prescribed antibiotic followed by ciprofloxacin (23%), cefuroxime (13%), cefotaxime (11%) and meropenem (10%). Ciprofloxacin, cefuroxime, and cefotaxime are mostly prescribed by the orthopedic ward while co-amoxiclav and meropenem are mostly prescribed in professorial surgical and medical wards. The highest rate of resistance with prescribed amount is observed with ciprofloxacin and lowest with meropenem. The resistance percentage has a positive linear relationship with the prescribed amount. Coliforms has the highest percentage of resistance in all five antibiotics.

Conclusions: Co-amoxiclav is the most commonly prescribed antibiotic in all four units while Ciprofloxacin has the highest overall resistance rate with the prescribed amount. Resistance rate steadily increases with the amount of antibiotic prescribed. Coliforms have the highest percentage of resistance to all five antibiotics.

Keywords: Antibiotic, resistance, prescription, hospital