
Poster

[P25-5] P25-5: Anti-infective drugs (5)

Chair: Paula Schaiquevich, Argentina

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[P25-5-7] Antimicrobial resistance pattern in a block primary health centre in India

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Background

Rampant medical practice by unqualified practitioners in rural India lead to injudicious use of antimicrobials resulting in antimicrobial resistance (AMR). It is necessary to monitor such practices. This study was conducted to identify the group of organisms developing resistance, know the classes of drugs against which resistance has emerged and assess the possible factors favouring AMR.

Methods

This was an observational study from June to November 2016 in a block primary health centre in West Bengal. Data regarding culture and sensitivity of the organisms isolated from different sources such as urine, blood, wound swab/pus, stool and sputum were collected from all the patients for whom those investigations were requested. Sample processing, identification of organisms and antimicrobial sensitivity were carried out as per the standards guidelines of the referral laboratories.

Results

Out of 198 specimens, 122 (61.1%) showed significant growth of organisms exhibiting resistance to either single or multiple drugs. *Escherichia* was the most common organism isolated with a total of 112 (56.6%), followed by *Klebsiella* 90 (45.5%), methicillin sensitive *Staphylococcus aureus*, 81 (40.9%), *Pseudomonas* 66 (33.3%), *methicillin* resistant *Staphylococcus aureus* 32 (16.2%), *Proteus* 6 (3%), *Enterococci* 3 (1.5%) and *Citrobacter* 1 (0.5%). Maximum resistance was observed with ampicillin, amoxicillin, amoxicillin-clavulanic acid, cotrimoxazole, second and third generation quinolones, first and second generation cephalosporins, and macrolides and carbapenems. Least resistant or highly sensitive were nitrofurantoin, chloramphenicol, aminoglycosides, tigecycline, doxycycline and colistin among the gram-negative bacteria. Azithromycin, clindamycin, gentamycin, nitrofurantoin and vancomycin were the most sensitive antimicrobials against the gram-positive bacteria. Lack of knowledge on the consequences of inappropriate antimicrobial use was exhibited by 95% of patients in this study.

Conclusions

AMR was more with commonly used antimicrobials that are available since long. Sensitization, training and monitoring unqualified practitioners and periodic AMR monitoring in the community are mandated to restrict further emergence of resistance.