

## THE ANTIBIOTIC SUSCEPTIBILITY PATTERN OF BACTERIA ISOLATED FROM URINE OF CANCER PATIENTS

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Antibiotic resistance is a major concern among cancer patients. This study was carried out to assess the microbial spectrum and the antibiotic susceptibility pattern (ABST) of bacteria isolated from urine of cancer patients. The variations in the susceptibility pattern with catheterization and the type of cancer were also evaluated. A prospective study was conducted at Apeksha Hospital, Maharagama from September to November 2017, where 202 cases of positive urine cultures were analysed. The spectrum of isolated organisms consisted mainly of Coliforms (70.3%) followed by Pseudomonas spp. (11.4%), Enterococcus spp. (9.9%), Staphylococcus spp., (4%), Streptococcus spp. (2%) and Acinetobacter spp. (2%). The analysis of ABST patterns of these isolates revealed alarmingly high rates of resistance to most of the antibiotics tested. Coliforms isolated were highly resistant (Sensitivity < 50%) to all the 1st line antibiotics except Nitrofurantoin (59.3% sensitive). They were susceptible to 2nd

line antibiotics namely Netilmicin, Amikacin, Imipenem and Meropenem. The ABST pattern of Pseudomonas spp. isolated also showed remarkably high rates of resistance to all the antibiotics tested. They demonstrated low sensitivity to commonly administered antibiotics like Gentamicin (only 41.2% sensitive) and Ciprofloxacin (only 33.3% sensitive). Among the antibiotics tested for Enterococcus spp., Ampicillin (78.9%) showed very high level of resistance while Nitrofurantoin, Vancomycin and Teicoplanin proved to be comparatively effective. Of the Enterococcus spp., 20% were resistant to Vancomycin. Catheterization and the type of cancer did not significantly affect the microbial spectrum in this population, yet it influenced the level of resistance.

**Keywords:** Antibiotic susceptibility, Urinary bacterial isolates, Cancer.