

Study to demonstrate the genotype of ESBL producing strains of Escherichia Coli and Klebsiella spp. in samples taken from a Tertiary Care Hospital in Colombo, Sri Lanka. MD (Medical Microbiology) - 2006 D 1679

The study was conducted in 2004 on sequentially collected clinical samples presumptively identified as Escherichia coli Klebsiella spp by colony appearance gram stain during a three month period. The samples were screened using the NCCLS screening criteria for ESBL . Confirmatory tests for ESBL using the Oxoid combination disk method was done on the screening positive isolates .The combination disks used were Ceftazidime/Clavulanic acid Cefotaxim/Clavulanic acid. The positive isolates were confirmed as being Escherichia coli Klebsiella spp by biochemical tests. 50 ESBL positive isolates thus obtained were tested by PCR for blaSHV blaTEM genes by the following primers. blaSHV - Forward GGT TAT GCG TTA TAT TCG CC Reverse - TTA GCG TTG CCA GTG CTC blaTEM- Forward ATG AGT ATT CAA CAT TTC CG Reverse - CTG ACA GTT ACC AA T GCT TA The gene for TEM , blaTEM was found in 19 out Of 50 isolates tested (38 percent) . The gene for SHV , blaSHV was found in 16 out of 50 isolates (32 percent). Both blaSHV blaTEM was found in 7 isolates (14 percent) Either of the genes could not be demonstrated in 22 isolates (44 percent). 17 isolates were Klebsiella spp (34 percent) out of which 10 had blaSHV (59 percent) 6 had blaTEM (35 percent) 5 had both (29 percent) 6 had neither (35 percent) . 33 isolates were Escherichia coli of which 10 had blaTEM (30 percent) 4 had blaSHV (12 percent) 1 had both (3 percent) 20 had neither (60 percent)