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Abstract (publication only)

**Coexistence of extended-spectrum beta-lactamase (ESBL) and ampC plasmidic beta-lactamase in *Escherichia coli*, *Klebsiella pneumoniae* and *Proteus mirabilis* in a two-year period**

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**Objective:** To study the coexistence of the ESBL and ampC plasmidic (ampCp) beta-lactamase in the *Escherichia coli*, *Klebsiella pneumoniae* and *Proteus mirabilis* strains isolated from tract urinary infections. To document antibiotics susceptibility in the treatment of urinary tract infections caused by extended-spectrum beta-lactamase (ESBL) producing *E. coli*, *K.pneumoniae* and *P.mirabilis*. **Method:** Retrospective study of ESBL producing *E. coli*, *Kl.pneumoniae* y *P.mirabilis* strains isolated from urinary clinical samples of patients from Hospital Miguel Servet from 2010 to 2011. Isolates were identified and tested using MicroScan-WalkAway. ESBL production was confirmed by the double-disk diffusion method according to CLSI. AmpCp beta-lactamases were confirmed by the use of boronic acid in disk diffusion test according to CLSI in the ESBL strains with cefoxitin concentration equal or superior to 16. **Result:** In 2010, 4977 *E. coli*, 813 *K.pneumoniae* and 439 *P.mirabilis* were recovered. 248 (4.98%) 33 (4.05%) and 2 (0.45%) isolates were positive for ESBL. We tested 16 strains of ESBL *E. coli* with CMI of cefoxitin equal or superior to 16 to find one strain with AmpC plasmidic beta-lactamase. Ciprofloxacin and norfloxacin were resistant in 73.14% and 68.19%. 9.18% of the strains were resistant to nalidixic acid with quinolones sensible. Fosfomicin was sensible in 86.92%. Gentamicin and tobramycin were sensible in 71.73% and 55.83%. Trimethoprim/sulfamethoxazole was resistant in 69.25%. From 01-01-2011 to 31-10-2011, 4181 *E. coli*, 618 *K.pneumoniae* and 262 *P. mirabilis* were recovered. 250 (5.97%), 29 (4.69%) isolates were positive for ESBL. We tested 28 strains of ESBL *E.coli* with cefoxitin equal or superior to 16 to find five strains with AmpCp beta-lactamase. Ciprofloxacin was resistant in 78.13% and norfloxacin in 73.47%. Nalidixic acid resistant with quinolones sensible was found in 6.81%. Fosfomicin was sensible in 92.11%. Gentamicin was sensible in 64.15% and tobramycin 51.97%. Trimethoprim/sulfamethoxazole was resistant in 56.99%. **Conclusion:** ESBL strains remains similar in our study. *E. coli* has been the only specie with positive result to AmpCp beta-lactamase in a strain which presented a cefoxitin concentration superior to 16. More further studies are obliged to conclude if the presence of AmpC beta-lactamases is increasing. Most of the ESBL strains were resistant to quinolones. Fosfomicin remains as a good therapeutic option.