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Risk Factors for Antibiotic-Resistant *E coli* Isolated From UTI Patients

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Sotto and colleagues have reported on the results of a prospective study to evaluate the prevalence of resistance to penicillins, cephalosporins, carbapenem, quinolones, aminoglycosides, and trimethoprim-sulfamethoxazole (SXT) in 320 *Escherichia coli* isolates obtained from hospitalized patients with acute urinary tract infections (UTIs). The study period was from November 1998 to February 1999. They also studied these strains for risk factors for resistance to amoxicillin-clavulanic acid (AMC), fluoroquinolones (FQs), and SXT.

Resistance rates were consistent with those from major recent studies reported in the literature. Multivariate analyses selected the following factors as being significantly associated with *E coli* resistance: (1) for resistance to AMC, prior (1 year) UTI (odds ratio [OR]=2.71), prior (1 year) urinary catheter (OR=2.98), and prior (6 months) antibiotic exposure (OR=2.68); (2) for resistance to FQs, male gender (OR=3.87), with a trend toward significance for age >65 years (OR=7.67), and prior (1 year) UTI (OR=2.98); (3) for resistance to SXT, male gender (OR=1.91), hospitalization in an intermediate-term-care unit (OR=2.18), and prior (1 year) UTI (OR=2.03).

The authors indicate that the

results suggest prior UTI is a common risk factor for resistance to the different antibiotics tested. Although few studies on risk factors for *E coli* resistance to antibiotics have been published, careful interpretation of their findings, taking into consideration the population, infection site, and period studied, should contribute to the formulation of a better strategy that can be used to overcome antibiotic resistance.

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