INTRODUCTION:

Bloodstream infection caused by extended-spectrum beta-lactamase (ESBL)-producing pathogens has become a serious concern worldwide. The purpose of this study was to identify risk factors for bacteremia due to ESBL-producing Escherichia coli in a Turkish hospital.

METHODOLOGY:

We retrospectively reviewed the medical records of patients with E. coli bacteremia in a tertiary care centre from January 2007 to October 2011. Data from patients such as demographic features, underlying conditions, and antibiotic exposure were analysed.

RESULTS:

A total of 113 patients with bacteremia due to E. coli were included and data from patients with ESBL-producing E. coli (case patients) were compared to those with non-ESBL-producing E. coli (control patients). The frequency of ESBL producers was 38.9% (44/113). Exposure to fluoroquinolones and cephalosporins, history of intra-abdominal surgery intervention, and presence of central venous catheter and urinary catheter were more frequently detected among case patients (P < 0.05). Independent risk factors for bacteremia due to ESBL-producing E. coli were exposure to fluoroquinolones (OR 13.39, 95% CI 1.28-140.03) and cephalosporins (OR 3.48, 95% CI 1.03-11.74).

CONCLUSIONS:

Previous use of fluoroquinolone and cephalosporin in patients with bacteremia caused by E. coli increased the risk for ESBL-producing strains.