

## **Presence of anaerobic bacteria in the urinary tract of catheterized ICU patients.**

Rozenfeld KL1, Nitzan O1,2, Peretz A3,4.

### Abstract

The purpose of our study was to examine the extent of anaerobic bacteriuria in catheterized patients in the intensive care unit (ICU) and to search for risk factors for anaerobic bacteriuria. A urine culture was collected from each patient every 2 days during their ICU stay and incubated under aerobic and anaerobic conditions. Aerobic and anaerobic blood cultures were collected as well. Demographic, clinical, and laboratory data were collected from patient files. Ninety patients were included in this study, 32 women (35.6%) and 58 men (64.4%). A total of 663 cultures were obtained. Twenty-three patients (25.6%) had growth of anaerobic bacteria in a urinary culture at some point during ICU stay, with Bifidobacterium being the most common pathogen. Aerobic urinary cultures were positive in 38 patients (42.2%). A significant statistical correlation was found between the presence of aerobic and anaerobic bacteria in urine culture ( $p=0.0004$ ). Treatment with glycopeptides was found to be inversely associated with anaerobic bacteriuria ( $p=0.0292$ ), and treatment with imidazoles was associated with an increased risk of anaerobic bacteriuria ( $p=0.0186$ ). None of the patients developed bacteremia with the same anaerobic pathogen that was isolated from their urine. Anaerobic bacteriuria is a common phenomenon in catheterized patients in the ICU. Further studies are needed in order to define the clinical significance of these findings in such patients and in other patient groups as well as in healthy people