

P1631 Microbiology of urine samples obtained through suprapubic bladder aspiration: a 10-year retrospective study in HungaryMárió Gajdács*¹, Marianna Ábrók¹, Lazar Andrea¹, Edit Urbán¹¹ Institute of Clinical Microbiology, University of Szeged, Szeged, Hungary

Background: Suprapubic bladder aspiration is an invasive sampling process that allows for obtaining a urine sample directly from the bladder without the risk of contamination. The main indications of this method include urinary retention, urethral stricture, phimosis, congenital abnormalities or chronic infections of the urinary system. Sensitivity of the method in the detection of significant bacteriuria is close to 100%, in addition, this is the only type of urine sample suitable for cultivation of anaerobic bacteria.

Materials/methods: In the present study, the microbiological characterization of 187 urine samples (18.70±8.38/year), obtained through suprapubic bladder aspiration from 148 patients between 2008-2017 was performed at the Department of Clinical Microbiology, Albert Szent-Györgyi Clinical Centre (Szeged, Hungary). The overwhelming majority of patients were younger than 5 (41.71%) or older than 45 (44.39%) years of age, with a male-to-female ratio of 1.88. The processing of the samples was carried out in accordance with routine bacteriology procedures, while 28.88% of samples were also cultivated anaerobically, per request of the clinician. The identification of isolated bacteria was carried out using VITEK 2 (bioMérieux) and MALDI-TOF MS (Bruker Daltonics).

Results: Most samples originated from the Departments of Paediatrics (54.55%), Internal Medicine (20.86%) and Urology (15.51%); the suspected diagnoses included congenital abnormalities, suspicions of infection, renal failure and kidney stones. 32.63% of samples were positive with the following species in highest numbers: *Enterococcus faecalis/faecium* (26.23%), *Escherichia coli* (16.39%), *Klebsiella pneumoniae* (14.75%). Anaerobic bacteria were successfully cultivated (namely *Finegoldia magna*, *Peptococcus niger* and *Peptinophilus indolicus*) in 6.56% of isolates.

Conclusions: Suprapubic bladder aspiration can be considered as an important sampling procedure for the differential diagnostics of upper urinary tract infections, particularly in children under 2 years of age, in older, hospitalized patients and if chronic infections caused by anaerobes are suspected.

