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Introduction & Objectives: All international guidelines suggest to perform first void urine analysis with real-time polymerase chain reaction (PCR) evaluation in patients with suspicious of Sexual Transmitted Diseases (STDs). However, in everyday clinical practice the urethral swab procedure is very common. The aim of this study is to compare the analytical accuracy of PCR testing on urine specimens from Meares-Stamey 4-glass test (M&S) and PCR testing on urethral swab sample.

Materials & Methods: From January to October 2018, all patients with symptoms related to STDs were enrolled in this cross-sectional study. All patients underwent both urethral swab and Meares-Stamey 4-glass test. In our department we have a dedicated staff member for the study of prostatitis and STDs. Meares-Stamey 4-glass test has been performed at the morning at the arrival in the Department. After 3 hours the urethral swab has been performed. All samples have been analyzed in the same Laboratory.

Results: From a screened population of 35 patients, 29 agreed to be enrolled (mean age 28.9, SD \pm 13.5 years). From all enrolled patients, 11 had Mycoplasma infection (37.9%), 5 had Chlamydia trachomatis (17.2%) and 3 Neisseria gonorrhoeae (10%). 19 showed negative microbiological results (34.9%). The sensitivities and specificities for the urethral swab and Meares-Stamey 4-glass test were 92, 98 and 93, 99, respectively. No statistically significant difference has been reported between the two test. All patients reported a discomfort (median VAS 3.1) during the urethral swab procedure.

Conclusions: In conclusion, there is not any difference in terms of analytical accuracy between the two test for STDs diagnosis. The compliance to the urethral swab is lower when compared to the Meares-Stamey 4-glass test.