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ePoster Viewing

STD and other genital infections

Diagnosis of extra-genital *Chlamydia* and/or *Neisseria gonorrhoeae* infections by VERSANT® CT/GC DNA 1.0 assay

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Objectives

Chlamydia trachomatis (CT) and *Neisseria gonorrhoeae* (GC) infections still represent an increasing problem of public health, worldwide. Although unsafe anal and pharyngeal intercourses are common part of sexual repertoires and different cases of extragenital CT/GC infections are reported, extragenital specimens have not been cleared yet for nucleic acid amplification testing (NAAT). For that reason, many laboratories have performed their own validation studies in order to provide results for the clinical management.

In this study, Versant CT/GC DNA 1.0 Assay (Siemens) performances were evaluated by testing rectal and pharyngeal swabs collected from a high STD-risk population.

Methods

From February 2013 to October 2013, urine samples, pharyngeal and anorectal swabs were collected from patients attending the STD Outpatients Clinic of St. Orsola Hospital, Bologna. The patients were enrolled because of a history of unsafe anal and/or oral intercourses. Swabs and urine specimens were tested by Versant CT/GC 1.0 Assay. GC positive results were confirmed using a "home made" PCR assay targeting *PorA* gene. CT positive samples were further genotyped by RFLP analysis. Moreover, microbiological investigations for the main STDs (syphilis, HIV, HCV, HBV) were performed. Finally, Chi2 test and Student's t test were performed and a *P* value <0.05 was considered significant.

Results

A total of 220 patients were enrolled for the study: in particular 45 heterosexual females, 146 men having sex with men (MSM) and 29 heterosexual males. A significant difference was observed between mean male age (34.63 ± 0.70 years) and mean female age (30.28 ± 1.27 years) ($P=0.0051$). Moreover, male patients were more likely affected by sexually transmitted infections (STIs) than females ($P=0.003$).

During the study period 216 urine samples, 182 pharyngeal swabs and 119 anorectal swabs were tested for CT/GC detection.

Regarding urine samples, 20/216 (9.3%) resulted positive for CT, whereas 11/216 (5.1%) were scored GC positive. CT molecular typing revealed that genotype E was the most common (40%), followed by D and F.

Among pharyngeal swabs, 18/182 (9.9%) resulted GC reactive, being CT infections less relevant 5/182 (2.7%).

Finally, a total of 35 anorectal swabs were found positive for at CT (202.2%) or GC (14.3%). In particular, 18 were scored CT positive, 11 were GC reactive and 6 presented CT/GC coinfection). In the latter group, positive patients were more likely symptomatic ($P < 0.01$) and presented more STIs ($P = 0.007$) than negative subjects. Genotype L2 was identified by CT molecular typing in 14 MSM.

All GC positive results obtained by Versant CT/GC DNA 1.0 Assay were confirmed by “home made” PCR testing.

Conclusions

In our experience, even if Versant CT/GC Assay is not licensed for extragenital use, it showed excellent performances in CT/GC DNA detection on rectal and pharyngeal swabs.