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Poster Session VI

Molecular diagnosis of sexually-transmitted pathogens

LYMPHOGRANULOMA VENEREUM: AN EMERGING PROBLEM IN HIV POSITIVE PATIENTS

G. Gregori¹, I. Dal Conte², E. Burdino¹, M.G. Milia¹, T. Alice¹, T. Ruggiero¹, A. Lucchini², G. Di Perri³, V. Ghisetti¹

¹Laboratory of Microbiology and Virology Department of Infectious Diseases, Amedeo di Savoia

Hospital, Torino, Italy ; ²Sexual Transmitted Infections Clinic, Amedeo di Savoia Hospital, Torino, Italy ;

³Unit of Infectious Diseases Department of Medical Science University of Turin, Amedeo di Savoia Hospital, Torino, Italy

Objectives. The lymphogranuloma venereum (LGV) is a sexually transmitted disease caused by serotypes L of *Chlamydia trachomatis* (CT). Always considered an endemic disease in developing countries, only in recent times we have witnessed its appearance in America and Europe, especially in communities of men who have sex with men (MSM). The aim of this study was to determine the prevalence of *Chlamydia trachomatis* LGV biovar, in a group of MSM, attending the Sexually Transmitted Infections outpatient clinic, Department of Infectious Diseases, Amedeo di Savoia Hospital in Turin, Italy.

Methods. From January 2009 to October 2013, samples from 1310 MSM patients were screened for the presence of *Chlamydia trachomatis* DNA (CT-DNA). DNA extraction was performed with the NucliSens easyMAG system (BioMérieux, Italy) and CT detection with the COBAS® TaqMan® CT Test v2.0 (Roche, Branchburg, NJ USA). CT-DNA positive samples were further analyzed for the presence of LGV strains with a LGV-specific homemade TaqMan real-time PCR assay for polymorphic membrane protein H gene (*pmph* gene); in LGV positive samples, LGV typing was performed with a second real-time PCR for outer membrane protein I (*OmpI*) that differentiate LGV-serovars L1, L2 and L3.

Results. CT-DNA was detected in 218 samples (207 anal, 8 urethral, 3 genital muco-cutaneous specimens) from 183 MSM patients (14%), 122 HIV-negative and 61 (33.3%) HIV-positive. LGV was detected in 29 patients (15.8%) while 154 were LGV-negative. The majority of LGV-positive patients (28/29) were also HIV-positive. Being HIV-positive was significantly associated with LGV infection in patients with CT-positive in genital and anal samples (chi square test=58.6, Fisher test $p < 0.0001$). LGV typing showed the prevalence of LGV-L2 strain (89.6%). Anal symptoms were present in 97% of LGV-positive patients. Treatment with Doxycycline was effective in all cases as demonstrated by a negative test of cure.

Conclusions. Our study is in line with other experience in Europe pointing out how LGV is an emerging sexually transmitted infection in HIV-positive MSM. Despite the disease has been known almost for several years in European countries, nowadays LGV is still a hidden disease that affects vulnerable groups, and misdiagnosis or delayed diagnosis is common. Early diagnosis is very important because serious and permanent adverse *sequelae* may occur if LGV is left untreated. Antibiotic treatment is highly effective and most complications are preventable if therapy is initiated in the early stages of the infection. Our results suggest that routine testing for LGV among HIV-positive MSM is highly recommended.