P111

BATTERIOLOGIA

RAPID AND SIMULTANEOUS DETECTION BY A MULTIPLEX REAL-TIME PCR ASSAY OF BACTERIAL VAGINOSIS (BV) AMONG WOMEN ADMITTED TO UNIVERSITY HOSPITAL "POLICLINICO UMBERTO I".

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INTRODUZIONE

Bacterial vaginosis (BV) is characterized by the substitution of normal lactobacillary flora by anaerobic or facultative bacteria. To date, Amsel criteria and Nugent scoring are the methods of choice for the diagnosis of BV, although the accuracy is less than optimal. The use of quantitative Polymerase Chain Reaction (q-PCR) method could improve the diagnosis of BV. The aim of this study was to perform a diagnosis of BV among women admitted to Gynecology Unit of Sapienza University Hospital "Policlinico Umberto I" using a multiplex q-PCR. Moreover, in order to obtain a complete clinical framework of patients enrolled, also the potential presence of sexually transmitted infections (STI) was investigated by using the same platform. Finally, molecular data were compared with those obtained through the gynecologist's microscopic observation of vaginal fluid.

METODI

A total of 328 genital swab, collected from Caucasian women sexually active and not pregnant, were analyzed by Allplex™ molecular method. Samples automatic process was performed on Nimbus IVD extraction platform (Hamilton Robotics, Switzerland), followed by a multiplex q-PCR (Allplex™ BV Assay, Seegene) specific for the detection of bacteria associated with vaginosis: Lactobacillus spp., Gardnerella vaginalis, Atopobium vaginae, Megasphaera Type 1, Bacteroides fragilis and Mobiluncus spp. Furthermore, from the same tube, the detection and the identification of 7 Candida spp. and of 7 pathogens, causing STI (Chlamydia trachomatis, Neisseria gonorrhoeae, Trichomonas vaginalis, Mycoplasma genitalium, Mycoplasma hominis, Ureaplasma urealyticum and Ureaplasma parvum), was performed.

RISULTATI

Data obtained were analyzed by Seegene Viewer software and interpreted as positive or negative. Out of a total of 328 specimens, 51 samples were found positive for BV. Moreover, 7/51 BV positive samples were also positive for Candida spp. and 25/51 showed positivity for sexually transmitted pathogens. Comparison of molecular data with those obtained through the gynecologist's microscopic observation, evidenced that 40/51 were in agreement to Amsel criteria whereas 11 resulted undiagnosed by microscopic observation.

CONCLUSIONI

Although Amsel and Nugent criteria remain the Gold standard for BV diagnosis, the Allplex™ molecular method ensures a high sensitivity and allows the detection of more pathogens simultaneously with a Turn Around Time (TAT) of less than 5 hr.