

**P1673 Vulvovaginitis in prepubescent and pubescent girls**Stavroula Baka\*<sup>1</sup>, Marianna Tsipi<sup>1</sup>, Stella Demeridou<sup>1</sup>, Vasiliki Gennimata<sup>1</sup>, Evangelia Kouskouni<sup>1</sup><sup>1</sup> Microbiology Laboratory, Aretaieio Hospital, National and Kapodistrian University of Athens, Athens, Greece

**Background:** Vulvovaginitis is a common infection of the genital system in prepubertal and pubertal girls. Such an infection, if not responding to hygienic measures, needs further investigation through vaginal cultures, since treatment should be tailored to each specific patient. However, the significance of the pathogens isolated from the vaginal cultures must be evaluated only after taking into consideration clinical information and possible risk factors, if any. We conducted this study to investigate the pathogens isolated in a group of prepubertal and pubertal girls with signs and symptoms of vulvovaginitis.

**Materials/methods:** A total of 1125 girls aged 2 to 17 years, presenting at the outpatient clinic for pediatric and adolescent gynecology of our hospital with signs and symptoms of vulvovaginitis were included. Cases were divided into 2 groups: 546 prepubertal and 579 pubertal. Vaginal samples were inoculated onto blood agar, MacConkey agar, Mannitol salt agar, Sabouraud dextrose agar, *Gardnerella* agar and Wilkins-Chalgren agar as well as chocolate agar followed by incubation in aerobic, anaerobic or CO<sub>2</sub> atmosphere at 37°C for 24 or 48 hours, as appropriate. The identification of isolated strains and their susceptibility test to antibiotics were carried out using the automated system VITEK 2 (BioMerieux, Marcy l'Etoile, France).

**Results:** Positive cultures were obtained from 293 (53.7%) of prepubertal girls and 444 (76.7%) of pubertal girls. A total of 315 and 450 pathogens were detected in prepubertal and pubertal subjects, respectively. Isolated bacteria in the prepubertal and pubertal groups included 34.3% and 10.4% Gram-positive cocci, 32.4% and 10.2% Gram-negative rods, 7.9% and 32.7% *Gardnerella vaginalis*, 25.4% and 36.7% anaerobes, respectively. *Candida* species were isolated only in the pubertal girls (10.0%).

**Conclusions:** In this study, the most common isolated pathogens were Gram-positive cocci and Gram-negative rods in the prepubertal girls while *Gardnerella vaginalis* and anaerobes were the predominant pathogens in the pubertal girls. *Candida* species were isolated only from samples of the pubertal group. Vulvovaginitis is the most frequent reason for referral to the pediatric and gynecology services and it can cause repeated clinical episodes. Awareness of the pathogens often implicated in cases of vulvovaginitis is essential.

