PREVALENCE OF AEROBIC VAGINITIS AMONG DIFFERENT AGE GROUPS OF SYMPTOMATIC PATIENTS

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Objectives: Aerobic vaginitis is a recently defined clinical entity and is characterized by an alteration in the vaginal bacterial flora (deficient or lacking lactobacilli) and the isolation of aerobic microorganisms (cocci or bacilli) from vaginal cultures of symptomatic patients. Since the prevalence of aerobic vaginitis is still largely unknown, we sought to evaluate the prevalence of aerobic vaginitis among four different age groups of symptomatic patients.

Methods: Over a period of 5 years (August 2008-August 2013), vaginal samples from 3414 consecutive outpatients presenting with signs and symptoms of vaginitis at the 2nd Department of Obstetrics and Gynecology of Aretaieio University Hospital were investigated through wet mount microscopy and cultures. Samples were cultured under standard conditions and the identification of the isolated strains was carried out with the API System and the automated system VITEK 2 (BioMerieux, Marcy l'Etoile, France). Only cases with clear and significant overgrowth of one aerobic microorganism were included in this analysis. Patients were divided in four age groups: 442 girls 2-17 years, 1165 non-pregnant reproductive age women 18-45 years, 1264 pregnant women 18-45 years and 543 postmenopausal women (> 50 years).

Results: Aerobic pathogens were isolated in 130/442 (29.4%) children 2-17 years old out of which 4/130 (3.1%) had *Staphylococcus aureus*, 5/130 (3.8%) coagulase-negative staphylococci (CNS), 10/130 (7.7%) *Streptococcus agalactiae*, 17/130 (13.1%) Streptococcus spp, 28/130 (21.5%) Enterococcus spp and 66/130 (50.8%) Enterobacteriaceae. Aerobic vaginitis was diagnosed in 131/1165 (11.2%) among non pregnant reproductive age women. *S. aureus* was isolated in 1/131 (0.8%), CNS in 2/131 (1.6%), *S. agalactiae* in 53/131 (40.4%), Enterococcus spp in 38/131 (29.0%) and Enterobacteriaceae in 37/131 (28.2%). In the group of pregnant women, aerobic vaginitis was identified in 203/1264 (16.1%), with 3/203 (1.5%) presenting *S. aureus,* 11/203 (5.4%) CNS, 48/203 (23.6%) *S. agalactiae*, 3/203 (1.5%) Streptococcus spp, 67/203 (33.0%) Enterococcus spp, and 71/203 (35.0%) Enterobacteriaceae. Finally, the prevalence of aerobic vaginitis in postmenopausal women was 21.2% (115/543) with *S. aureus* being isolated in 2/115 (1.7%), CNS in 4/115 (3.5%), *S. agalactiae* in 41/115 (35.7%), Streptococcus spp in 4/115 (3.5%), Enterococcus spp in 25/115 (21.7%) and Enterobacteriaceae in 39/115 (33.9%).

Conclusion: The prevalence of aerobic vaginitis was not negligible in the groups studied, in particular in children and postmenopausal women. Vaginal microorganisms most commonly associated with aerobic vaginitis were found to be streptococci (mainly *S. agalactiae* and Enterococcus spp) and Enterobacteriaceae. Finally, the implications of undiagnosed and undertreated cases of aerobic vaginitis are still unknown and further studies are warranted.