P34: Yeast colonization of the oral cavity in a young population

Ana Bessa[1,3], Stéphanie Ferreira[2,3], Anabela Moreira[2,3], Teresa Moreira[2,3], Manuela Amorim[2,3], Sandra Mota[2,3]

[1]School of Allied Health Technologies, Polytechnic Institute of Porto, Portugal
[2]Department of Clinical Analysis and Public Health, School of Allied Health Technologies, Polytechnic Institute of Porto, Portugal
[3]Research Centre on Health and Environment, School of Allied Health Technologies, Polytechnic Institute of Porto, Portugal

Presenting author: ana_bessa_93 @hotmail.com

Introduction: Oral cavity is an environment where several kinds of fungi are frequently found. *C. albicans* is the most commonly isolated specie. *Candida spp.*, besides being part of the oral mucosa in healthy individuals, constitutes an important group of opportunistic pathogenic fungi. When there is a change on oral cavity environment microorganisms excessive growth can occur, resulting in oral candidiasis.

Objectives: To characterize mycological oral flora in a sample of students from School of Allied Health Technologies and to study the influence of some factors in oral colonization, such as orthodontic appliances, oral hygiene, smoking habits and diabetes.

Materials and Methods: Saliva samples were collected from 69 participants and plated on *Sabouraud Dextrose Agar* (SDA) for Colony Forming Unit count. The obtained colonies were picked up for SDA and CHROMagar. It was performed the serum filamentation test and chlamydospore test to identify *Candida albicans* specie. Risk factors data were also collected using a questionnaire. For statistical analysis we conducted a uni and bivariate study, using qui-square and fisher tests with =0.05.

Results and Discussion: Growth was obtained in 18 samples (26%), of these, 14 (77.8%) were identified as *Candida albicans*, and the remaining 4 (22.2%) identified as non-*Candida albicans*. A relationship was found between growth and use of orthodontic appliances (p=0.029). Of the 11 users of orthodontic appliances, 6 (54.5%) were positive for yeasts growth.

Conclusion: Our results are consistent with literature. We found an association between the oral mucosa colonization and use of orthodontic appliances. Such studies allow us to know the mycological composition of the normal oral flora and to study the existence of factors that may promote growth of these microorganisms in these environments. Since oral cavity is the portal of entry for microorganisms in both gastrointestinal and respiratory tracts, is crucial to know the microorganisms present in this cavity.

References

1. Ghannoum, M. A., Jurevic, R. J., Mukherjee, P. K., et al. (2010). Characterization of the oral fungal microbiome (mycobiome) in healthy individuals. PLoS Pathogens, 6(1), e1000713.
2. Monteiro-da-Silva, F., Araujo, R., Sampaio-Maia, B. (2014). Interindividual variability and intraindividual stability of oral fungal microbiota over time. Medical Mycology, 52(5), 498–505.