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The presentation of oral candidiasis in cases who attended the Wits Oral Health Centre over a 5-year period: a retrospective study.

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ABSTRACT

INTRODUCTION

Oral candidiasis, remains one of the most prevalent opportunistic fungal infections throughout the world and this high incidence is attributed to the multiplicity of predisposing factors that facilitate the metamorphosis of oral commensal candida to fungal infection. This explains why there has been such an emphasis on oral candidiasis and its associated risk factors. There are few published retrospective studies that asses the prevalence of oral candidiasis, the types diagnosed more frequently as well as the risk factors and treatment prescribed.

PURPOSE

The purpose of this study was to identify the presentation of oral candidiasis according to the diagnostic criteria by Samaranayake over a 5-year period. From this cohort the sites affected will be highlighted, the potential risk factors will be identified, and the treatment options will be commented on.

METHODOLOGY

This was a retrospective observational study making use of quantitative variables as contained in patient files and histological reports dating from 01 January 2015 up to 31 December 2019. Descriptive statistics of mean, median, interquartile range were used to summarize age; and percentage as well as frequency was used to summarize categorical variables. Chi-squared and Fischer's exact test were used to determine the association between the diagnosis and gender, risk factors and site. Mann Whitney U test was used to determine the significant difference between the type of oral candidiasis and age. Binary logistic regression was used to determine the predictor of the type of oral candidiasis. Level of significance was set at p-value less than 0.05.

RESULTS

The cohort consisted of 122 patients of which 59% were females. There was no significant association between gender and the type of oral candidiasis ($p>0.05$). There was no significant difference in the age of the participants that presented with any of the type of oral candidiasis ($p>0.05$). Pseudomembranous candidiasis was the most prevalent type accounting for 52% of the cases and the major risk factor identified was HIV (28%). The tongue (64%) was the most affected site. The treatment most commonly prescribed was a combination of chlorhexidine gluconate 0.2% mouth rinse and miconazole oral gel 2% (59.2%). Denture stomatitis showed a significant association with the use of dental prosthesis ($p=0.000$), chemotherapy and or radiotherapy ($p=0.048$). Furthermore the use of dental prosthesis significantly increased the odds of presenting with denture stomatitis by 99 (11.65 - 841.27) times and chemotherapy and or radiotherapy by 10.8 (1.37-85.10) times. Pseudomembranous candidiasis was significantly associated with the buccal mucosa ($p=0.010$) and the odds of pseudomembranous presenting in the buccal mucosa is significantly increased by 3.187 (1.282-7.927) times, p-value=0.013. Erythematous candidiasis showed significant association with the tongue ($p=0.015$) and the odds of erythematous presenting on the tongue are significantly increased by 4.713 (1.313-16.911) times, p-value=0.017. There was a significant association between oral candidiasis in the buccal mucosa site and HIV ($p=0.031$). Further analysis using binary logistic regression showed that the odds of presenting with oral candidiasis in the buccal mucosa is increased by 2.786 times in patients that are HIV positive compared to patients that are HIV negative. There was a significant association between oral candidiasis in the palatal site and the use of dental prosthesis ($p=0.002$). Further analysis using binary logistic regression showed that the odds of presenting with an oral candidiasis in the palate is increased by 4.981 times in patients with dental prosthesis compared to patients without dental prosthesis.

CONCLUSION

As the results indicate that specific risk factors play an integral role in the development of oral candidiasis and therefore the presentation of oral candidates in given population may differ depending on both local and systemic factors that the patients may be affected by. In South Africa specifically HIV is prevalent and therefore it is expected that pseudomembranous and erythematous candidiasis would predominate within the period of the study. It is interesting to see that although more women presented for the treatment of oral candidiasis, there was no significant association between gender and the type of oral candidiasis.