

https://dspace.org/

Factors associated with hospitalization outcomes in patients with orofacial sepsis

Scheepers, Ruan

2024

https://hdl.handle.net/10539/37614

Downloaded from a DSpace repository. https://dspace.org/

ABSTRACT

Background: Orofacial infection is an easily preventable disease which if left untreated may spread to the deep neck spaces, resulting in life-threatening complications. The purpose of this study was to review the clinical features of patients admitted with orofacial infections in patients presenting to Charlotte Maxeke Johannesburg Academic Hospital (CMJAH) and Chris Hani Baragwanath Academic Hospital (CHBAH). The objective was to identify anatomical, patient and hospital- level factors that influence the clinical outcome of orofacial infections.

Methods: This was a prospective cross-sectional study performed in the Department of Maxillofacial and Oral Surgery at CMJAH and CHBAH over a 12-month period. All patients over the age of 18, admitted with the diagnosis of orofacial infections were included in the study. Data were collected at admission and during the course of patient stay in hospital. The data were categorised as demographic, health status, clinical presentation at admission, special investigations performed, anatomical and treatment variables. A multivariable linear regression analysis was used to examine the association between hospital stay (outcome variable) and the predictor variables. Comorbid bivariate conditions were tested using simple linear regression analysis and were included in the final multivariable linear regression model. A Spearman's correlation coefficient was calculated to determine the strength of association between length of stay and comorbidity burden, fascial space involvement and individual comorbidities.

Results: A total of 152 patients were eligible for inclusion in the study. Fifty-seven-point 2 percent (57.2%) were male, mean patient age was 35±12.8 years, 13.8% were HIV positive and 9.9% of patients were diabetic. Furthermore, 75% of patients had multiple facial spaces involved in the infection, with trismus being the most prevalent presenting clinical

finding (80.9%). Hospital outcome and duration of hospital stay was correlated with C-reactive protein (CRP) level, white blood cell count (WBC), comorbid conditions such as hypertension, diabetes mellitus (DM) and metastatic cancer, multiple-fascial spaces involved and clinical signs such as third molar involvement and dysphagia at admission.

Conclusions: Orofacial infections involving 3rd molars and multiple fascial spaces should be treated aggressively to enhance clinical outcomes, in particular those presenting with comorbidities such as diabetes. Future prospective studies, involving larger sample sizes, are recommended to further substantiate and provide statistical support for the role of cost-effective biological factors such as CRP and comorbidities in predicting clinical outcomes and length of stay for patients with orofacial sepsis.