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Concordance between Clinical and Histopathological Diagnoses at Komfo Anokye Teaching Hospital Oral and Maxillofacial Unit

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ABSTRACT

Background: Accurate diagnosis of orofacial tumours is important as this determines the treatment options as well as the eventual treatment outcome. Agreement between clinical and histopathological diagnosis becomes important in this regard. **Aims:** The aim was to determine the level of agreement between clinical and histopathology diagnosis of orofacial lesions. **Method:** This is a retrospective study of all histopathology reports seen at KATH maxillofacial unit. Thedata collected included, clinical diagnosis and histological diagnosis. **Results:** A total of 567 histopathology reports were evaluated. The percentage of agreement between clinical and histopathological diagnosis was 62.8%. **Conclusion:** The agreement between clinical and histopathological diagnosis was high. However clinicians cannot rely on only the clinical diagnosis in managing patients.

Keywords: Histopathology; Biopsy; Concordance; Diagnosis

1. Introduction

The maxillofacial region is a common anatomic site for the development of infections, cysts and tumours of odontogenic or non-odontogenic origin. Oral mucosal lesions are commonly encountered in clinical practice [1].

Squamous cell carcinoma constitutes a major health problem in developing countries, representing a major cause of death [2], although it represents only 2% - 4% of all malignancies [3]. The major factor in the lack of improvement in prognosis over the years is the fact that cases of oral carcinoma are not diagnosed or managed until they are advanced. This diagnostic delay may be caused either by patients (who may not report unusual oral features) or by health care workers (who may not investigate observed lesions thoroughly). In another study at KATH, Donkor [4] looked at a total of 50 patients who presented with squamous cell carcinoma; majority had advanced lesions which according to him accounted for the poor treatment outcome.

In a UK study, it was observed that, the clinical diagnosis of general dental practitioners had a concordance of 49.4% with histological diagnosis, while specialists had 51.0%, giving an average of 50.6% for the two groups [5]. This is similar to the findings of Williams [6] of 56.4% concordance for general practitioners. Seoane [7] found a high level of agreement between oral and maxillofacial surgeons and general dental practitioners on diagnosis of inflammatory, benign and precancerous lesions but low level of agreement in diagnosing oral cancer.

There is currently no study that establishes a correlation between clinical and histopathology diagnosis of orofacial tumours and tumour-like lesions in Ghana. The aim was to determine the level of agreement between clinical and histopathology diagnosis of orofacial lesions. In a developing country like Ghana where there is scarcity of histopathological services, it is important to know the accuracy of our clinical diagnosis to help in the management of orofacial lesions.

2. Method and Statistics

This was a retrospective study of all histopathology reports seen at KATH maxillofacial unit from 1999 to October 2010. This study looked at the clinical and histopathological diagnosis of biopsy specimen. Data was entered into excel spreadsheet for cleaning and then to SPSS for descriptive analysis of data.

3. Results

A total sample size of 567 met the inclusion criteria for the histopathological and clinical diagnosis study. The age range was 5 to 84 years with a mean age of 34.6 (SD

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= 12) years. Conditions diagnosed include odontogenic cyst (OC) (6.5%), non-odontogenic cyst (NOC) (7.4%), benign fibrosseous lesions (BFL) (5.4%), Odontogenic tumours (OT) (16%), non-odontogenic tumours (NOT) (43.4%) and salivary gland tumours (SGT) (21.3%) (see **Figure 1**). The percentage of agreement between clinical and histopathological diagnosis was 62.0% (**Figure 2**).

4. Discussion

In a similar study from the UK, it was observed that, the clinical diagnosis of oral lesions provided by general dental practitioners had a concordance of 49.4% with histological diagnosis, while specialist oral and maxillofacial surgeons had a concordance of 51.0% [5]. In another study by Williams *et al.* [6] general practitioners had a concordance of 56.4%.

Seoane *et al.* [7] found a high level of agreement between oral and maxillofacial surgeons and general dental practitioners in the diagnosis of inflammatory, benign and precancerous lesions but low levels of agreement in diagnosing oral cancer.

In the current study, the average level of concordance over the study period was 62.0%, which is higher than the findings from the above-mentioned studies [5,8].

This high concordance could be due to the following reasons:

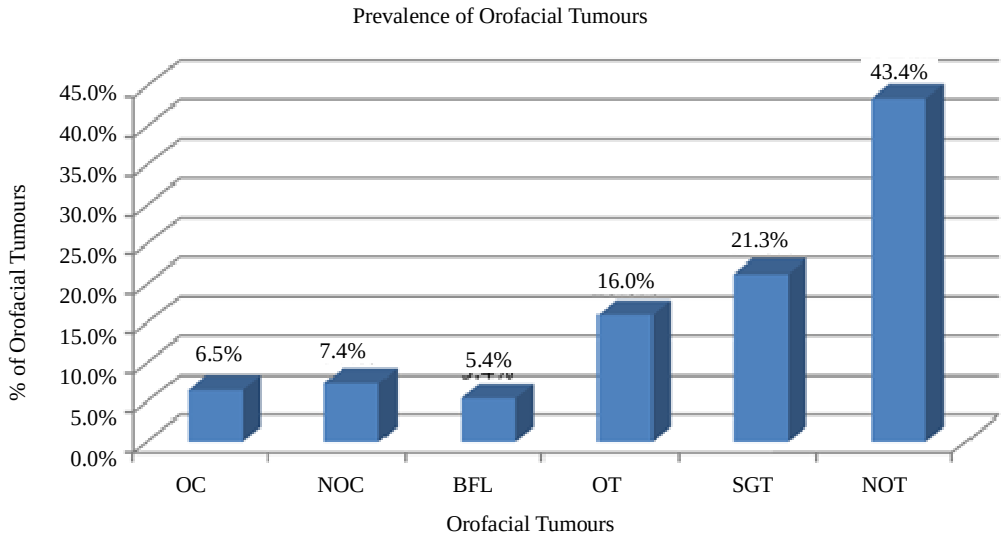

Figure 1. Prevalence of orofacial tumours. Key: OC: Odontogenic cyst; NOC: Non-odontogenic cyst; BFL: Benign fibrosseous lesions; OT: Odontogenic tumour; SGT: Salivary gland tumour; NOT: Non-odontogenic tumour.

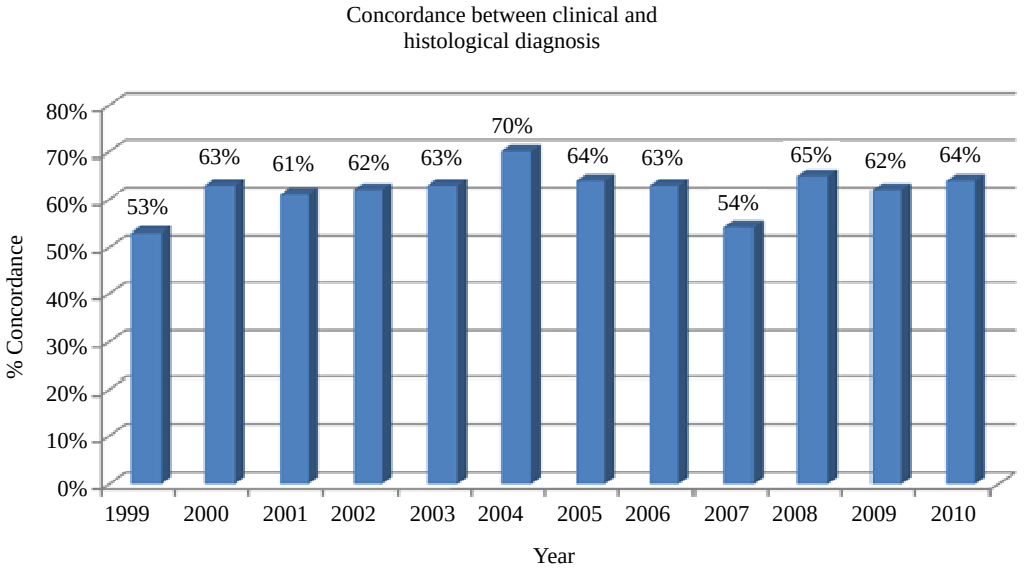

Figure 2. Percentage concordance between clinical and histopathological diagnosis.

a) The oral and maxillofacial surgery unit at KATH was until recently the only specialist centre for the management of orofacial lesions in the northern sector of Ghana and was attending to fairly advanced lesions, which made clinical diagnosis easier.

b) There was also the possibility of selective biopsy of such advanced lesions, thus increasing the likely of a concordant histological diagnosis.

Patient delays [9] in seeking medical care may be associated with lack of awareness, poverty and cultural beliefs. Furthermore the wide spread use of traditional local remedies among Ghanaians could also account for late presentation with advanced conditions which thus make clinical diagnosis of malignancy relatively easier.

In spite of the high concordance between clinical and histological diagnoses in this study clinicians cannot rely solely on clinical diagnosis only in making their management decisions. This is because; there is still a chance of making a wrong diagnosis as was the case in 38% of cases in this study. Head and neck tumours are among the relatively rapid proliferating group of tumours with a median potential doubling time of 6 - 7 days [10]. An early diagnosis is the key to the successful management of these tumours. Fortunately the anatomy of this region makes lesions easily accessible for examination and biopsy which in some cases can be performed under local anaesthesia.

5. Conclusion

General dental practitioners and specialist oral and maxillofacial surgeons are fairly good at diagnosing oral malignancies clinically. Along with medical practitioners they should be encouraged to conduct regular oral examination as part of systematic examination of patients and either refer suspicious lesions for further evaluation or carry out biopsy before referring.

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