DEMOGRAPHIC CHARACTERISTICS OF PATIENTS WITH
PLEOMORPHIC SALIVARY ADENOMA SEEN AT UNIVERSITY
OF NAIROBI DENTAL HOSPITAL

A COMMUNITY DENTISTRY RESEARCH PROPOSAL SUBMITTED IN
PARTIAL FULFILLMENT OF THE BACHELOR OF DENTAL SURGERY
DEGREE AT THE UNIVERSITY OF NAIROBI

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LIST OF ABBREVIATED WORDS:

1.) P.S.A - Pleomorphic Salivary Adenoma
2.) B.D.S - Bachelor Of Dental Sciences
3.) U.O.N - University Of Nairobi
4.) M.P.H - Master in Public Health
5.) M.MED - Masters in Medicine.
6.) S.G.T - Salivary gland tumour
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SUMMARY

Pleomorphic Salivary Adenoma (PSA) is a mixed benign tumor of salivary gland. It is the commonest tumor of salivary gland and occurs commonly on the parotid gland on the palate. It presents as a painless, slow growing mass in mouth or face that patients may be aware of for several years. It usually affects women mostly compared to males in both adults and children and its more common in Caucasian population than in African population.

The study is a descriptive cross sectional study aimed at determining the demographic characteristics of patients with PSA seen at University of Nairobi Dental Hospital.

The study will be conducted at the University of Nairobi Dental Hospital situated along Argwings Kodhek Road opposite Lee Funeral Home. All records of patients with PSA both seen at U O N Dental Hospital and referred from other hospitals from 1993-2003 will comprise the sample size. A data collection form will be used to collect the data.
INTRODUCTION

Pleomorphic salivary adenoma (PSA) is a mixed tumour of major salivary glands whose morphological complexity results from chondroid or even bone area are the results or products of tumour cells. It presents as a slow growing, painless, rubbery mass in the mouth or face that the patient may be aware of for several years. It may lead to difficult in swallowing, speaking, pain in the jaw; facial paralysis etc. and the overlying skin or mucosa is usually intact. PSA is the commonest benign salivary gland tumour; accounting for 92.5% of all benign SGT, of this 84% occur in parotid gland, 8% in submandibular gland, 0.5% sublingual, and 6.5% of all benign intraoral minor salivary gland.

Parotid gland PSA is more common in Caucasians population than in African population while submandibular and minor salivary gland PSA occurs more often in Africa than the Caucasian population. PSA occurs mostly in patients between 4th and 6th decade of life, hence very rare in children, in case it occurs it affects children with mean age of 11.8 years. In adult it affect females with mean age of 53.1 years and males with mean age of 53.1 years. PSA has high preponderance in female than in males with m:f ratio of 1:1.59 in adults and 1:1.9 in children.

PSA has some degree of recurrency after surgical treatment or may undergo malignant transformation which occurs mostly in a long term untreated tumour. The malignant transformation is seen only in 2-5% of cases.

The aim of the study is to determine the demographic characteristic of patients with PSA seen at University of Nairobi dental hospital.
LITERATURE REVIEW

Tumor is an abnormal mass of tissue the growth of which exceeds and is uncoordinated with that of normal tissues, and persists in the same, excessive manner after cessation of stimuli which evoked the changes and may be benign or malignant. The exact cause of tumors is unknown but various factors such as irradiation, alcohol, diet viruses e.g. HIV has been associated with cancers. In western countries cancer accounts for about 25% of all deaths while in Africa they account for about 2% all deaths. Among all cancers tumors of head and neck are the 6th most common tumors in the world. Salivary gland tumors are relatively rare constituting about 1-4% of all head and neck tumors. Among all salivary gland tumors PSA is the most common salivary gland tumor followed by muco-epidermoid carcinoma.

Study carried out in Kenya in 1992, indicated that Pleomorphic Salivary Adenoma (PSA) of parotid was common in males (38.9%), while that of palate was common in females (29.7%). The majority of patients presented with PSA in 3rd and 4th decades of life. PSA had a female preponderance with m: f ratio of 1:1.2.

Study carried out in Ibadan Nigeria in 1990, indicated that salivary gland tumors account for 2.8% of all tumors of head and neck. Out of this 68.1% were found in major salivary glands and 31.4% in intra-oral minor salivary glands. PSA was the commonest benign lesion occurring in parotid and palate. Similar trends were found in another study carried out in USA in 1995, which indicated that PSA was the commonest salivary gland tumor occurring mostly in the parotid gland (39.8%). Most of the PSA were seen in women (58% than in males (42%) and it was commonest in 4th, 5th and 6th decades of life.

A study in Spain in 1995 that indicated salivary gland neoplasms are very rare in children and adolescents, for instance, a study was carried out for a period of 44 years and only 38 cases affecting children under 19 years of age were recorded. The study indicated there was a female preponderance with m: f ratio of 1:1.9, and the parotid was the mostly affected gland (65.8%) with PSA being the most frequent benign salivary gland tumor. A study carried out in Germany on recurrence of PSA in 1995 indicated that the rate of recurrence of PSA reduced with the number of operations.
recurrence was 32.5% after 1 operation, 7% after 2 operations and 1.6% after 3
operations. Also the study showed that the operation of PSA of parotid may cause partial
paralysis in 13.5% or total paralysis in 8.5% of facial nerve 11.

In conclusion PSA is the common benign tumour of Salivary Gland occurring in
parotid gland and palate. It is more common in adults than in children with a female
preponderance.

PROBLEM STATEMENT
PSA being the common SGT it affects majority of the population. In its advanced stage it
may cause difficulty in breathing, swallowing, speaking, facial paralysis and undermine
cosmetic hence resulting in to a myriad of psychosomatic complications and problem of
social acceptance. On the other hand there is inadequate dental health personnel, high
cost of dental service, inadequate dental hospitals etc. all this leads to many cases of PSA
left untreated for long period hence posing a risk of PSA turning into malignant tumours.

JUSTIFICATION
One study done in Kenya concerning major SGT sought to identify occurrence and
magnitude of these tumors 12. However demographic characteristics of PSA were not
explored. This study therefore aims to identify and understand these demographic
characteristics, which will be essential for application of timely intervention or primary
prevention, early diagnosis and prompt cure. This study will provide data that the dentist
and the government would use directly in programming strategies to prevent and attend
to patients suffering from PSA.
OBJECTIVES

Main objective

To determine the demographic characteristic of patients with PSA seen at University of Nairobi Dental Hospital.

Specific objectives

1. To determine the geographic distribution of patients with PSA.
2. To determine whether there is sex predilection as regards PSA.
3. To determine at what age are patients commonly affected by PSA.

HYPOTHESIS

PSA has high preponderance in females than in males, both in children and in adults.
PSA occur common in parotid gland

VARIABLES

Independent:

- Sex
- Age
- Geographical distribution
- Gland affected

Dependent:

- Site
MATERIALS AND METHODS

Study Area
The study is to be carried out at UON Dental Hospital which is located along Argwings Kodhek road opposite Lee Funeral Home. The hospital is where undergraduate and postgraduate dental students are trained. It is a referral hospital where patients from all over Kenya are referred to, for specialized forms of treatment. Approximately 4,000 patients are treated per year in this hospital.

Study Population
Records of patients with a diagnosis of PSA diagnosed at the University of Nairobi Dental Hospital including those diagnosed and referred from other hospitals in Kenya from January 1993 to December 2003.

Study Design
A descriptive cross-sectional study.

Sample Size and sampling
All cases of PSA reported during the mentioned study period will comprise the sample size.

Data Collection
Data is to be collected using data collection forms from available records of patients who were seen in Oral Diagnosis clinic of University of Nairobi Hospital from January 1994 to December 2003 with positive diagnosis of PSA.

Inclusion Criteria
Records of all patients with diagnosis of PSA at the University of Nairobi Dental Hospital or diagnosed and referred from other hospitals from 1993-2003 will be included in the study.
**Exclusion Criteria**
Records of patients diagnosed to have other tumours apart from PSA at the University of Nairobi Dental Hospital or referred from other hospitals.

**Ethical Considerations**
Permission is to be sought from the relevant authorities of U.O.N Dental Hospital before scrutinization of patients’ records for information. All information obtained from these records will be treated with high confidentiality and names of the patients will not be recorded. All records of patients regardless of their tribes, age, residence or sex will be included in this study as long as they meet the inclusion criteria.

**Expected Benefits**
1. Information from this study will give an overview of demographic characteristics of patients with PSA in Kenya, as the hospital is a referral centre for specialized treatment. This will enable policy makers to formulate oral health programmes geared towards timely intervention for primary prevention, early diagnosis and prompt treatment of patients with PSA.

2. Information on demographic characteristics of patients with PSA will obtained for use in further research regarding PSA at University of Nairobi Dental School.

3. Partial fulfillment of Bachelor of Dental Surgery degree course at University of Nairobi.

**Logistics**
- Financial constraints
- Difficulties in retrieving of records
### BUDGET

1. **Proposal Writing**

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**TOTAL**  

|               |           |               | 4765       |
REFERENCES


8. Roddie, M.N, Tumor pathology, Muir’s textbook of pathology, pp 364


