PREVALENCE AND PATTERNS OF SALIVARY GLAND DISEASE IN ADDIS ABABA UNIVERSITY MAXILLOFACIAL SURGERY, AFFILLIATED HOSPITAL, ADDIS ABABA, ETHIOPIA

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Abstract

BACKGROUND The salivary gland located in cheek, mouth, floor of mouth they have different functions like digestion, protection of mouth and teeth. Numerous conditions affect this glands, sialolithiasis/stone in salivary glands and ducts/ inflammatory conditions and tumors are among the most common.

OBJECTIVE To assess the prevalence and pattern of salivary gland disease in patients who visited Maxillofacial Surgery departments (TASH & St. Peter hospital) from Jan 2019- Dec, 2021.

METHODS AND MATERIALSA multicenterfacility based retrospective cross sectional study was conducted by reviewing secondary data from chart of patients who were evaluated and managed with diagnosis of salivary gland disease during three years period. Data was collected, coded and entered to SPSS 21.0 for statistical analysis and results were presented with table and charts.

RESULTS The study showed prevalence of chronic disease among patients with salivary gland disease as 7% .Thirty patients (52.6%)had salivary gland disease located in submandibular gland the commonest salivary gland disease was seen to be sialadenitis which was 29.8%.

All of the benign tumors were a pleomorphic adenoma, and out of 11 malignant tumors 9 were found to be MECA.. Surgical treatment was used for the 89 % of the patients

CONCLUSION AND RECOMMENDATION

The most common salivary gland disease was sialadenitis followed by pleomorphic adenoma.

KEYWORDS– Salivary gland stones, Sialadenitis, Salivary gland tumors.

TABLE OF CONTENTS

List of table and figures

Abbreviations and acronyms

AAU-CHS Addis Ababa University collage of health science

CT – computer tomography

DRERC-department of research and ethics committee

ENT-ear nose throat

FNACUS-Fine needle aspiration ultrasound

MECA –Mucoepidermoid carcinoma

MRI- Magnetic resonant imaging

MOH-Ministry of health

RHB-Regional health bureau

TASH – TikurAnbesa specialized hospital

US- Ultrasography

1. INTRODUCTION

BACKGROUND

Saliva is a complex mixture of fluids, electrolytes, enzymes, and macromolecules that work together to perform various critical functions (1).

Salivary activities include lubrication to aid swallowing, the production of amylase enzymes to aid digestion, taste modulation, defense against cavities and infections, and speech communication. Oro-pharyngeal health suffers as a result of insufficient salivary secretion, as does a person's quality of life. The paired parotid, submandibular, and sublingual glands are the major salivary glands, and there are hundreds of tiny salivary glands throughout the oral cavity. (2)

A thorough medical history, as well as a head and neck examination, are used to diagnose salivary gland problems. While signs such as dry mouth or puffiness may indicate a salivary gland dysfunction, other salivary gland illnesses occur with no symptoms at all. A sore throat, poor breath, and trouble chewing, swallowing, and talking are all possible symptoms. These patients' dental hygiene may be jeopardized..(2)

Hypofunctioning salivary glands and xerostomia are linked to an increased risk of dental caries. As a result, appropriate dental hygiene is critical in these patients. (3)

Neoplastic (benign and malignant) diseases, infectious and noninfectious diseases, and neoplastic (benign and malignant) diseases are all factors to consider when investigating a patient with salivary gland dysfunction.(3).

Bacterial infections are more common in the elderly who have salivary hypofunction as a result of drugs, head and neck radiation, systemic illnesses, or dehydration. The parotid glands are primarily affected by viral infection of the salivary glands, which affects people of all ages but is more common in immunocompromised patients. (4)

Mumps, caused by the paramyxovirus, is a common viral infection in children that causes enlargement of the parotid glands on both sides. Adults are the most common victims of cytomegalovirus infection, which is usually moderate and results in non-specific symptoms. Because of obstruction of a salivary gland excretory duct, non-infectious (reactive) causes of salivary gland illnesses are the most common. Acute and chronic illnesses can be distinguished. Chronic recurrent sialadenitis is caused by past infection and/or ductal scarring, whereas acute sialadenitis is caused by an abrupt partial or total ductal obstruction (5).

Calculi, which are calcifications of mucous plug and cellular debris induced by dehydration and glandular inactivity, can also cause salivary gland swellings. Salivary calculi are most commonly found in the ducts of the submandibular glands (5)

In Ethiopia, comprehensive data on the prevalence and pattern of salivary gland illness is not readily available due to the diverse presentation of salivary gland disease.

The goal of our research is to determine the prevalence of salivary gland illnesses in patients who visit an AAU oral and maxillofacial surgery department and its linked St Peter Hospital.

2. STATEMENT OF PROBLEM

The salivary glands may be affected by a range of neoplastic and inflammatory disorders. Inflammatory disorders may be due to viral or bacterial infections, granulomatous conditions or autoimmune diseases.

A thorough history and physical examination are often adequate to recognize and differentiate many of these conditions. A wide array of benign and malignant neoplasms may also affect the salivary glands and a neoplasia should always be considered when assessing a salivary gland mass

Sialolithiasis, which is involved in 66% of the cases, is the main cause of obstructive salivary diseases. The submandibular gland is involved in 80%–90% of cases and the parotid gland in about 10%.8 The majority of calculi are located in the distal third of the duct or at the hilum of the gland, and intraparenchymal stones are rare.

Bacterial infections usually result from salivary stasis. They are common among the older population and postsurgical patients, as well as in cases of obstructive diseases of the duct system like stone or strictures.

The most common benign salivary gland tumor is the pleomorphic adenoma (24%-71%). It occurs in 60%- 90% of cases in the parotid gland. In approximately 80% of the cases, the tumor is located in the superficial part of the parotid gland, whereas in about 10% of the cases the deep part of the parotid gland is involved.

There are several histologic subtypes of primary malignant salivary tumors, with the most frequent malignant tumor of the salivary glands being mucoepidermoid carcinoma.

There are many patients who come to our clinic with various concerns connected to salivary gland disorders, such as infections, stones, and tumors. However, there is a lack of evidence on the prevalence and pattern of this illness

3. OBJECTIVES

3.1 General objective

- To determine prevalence and pattern of salivary gland diseases among patients evaluated and managed at department of oral and maxillofacial surgery, AAU and Saint Peter specialized hospital.

3.2 Specific objectives

- To determine magnitude of salivary gland disease
- To find out pattern of diseases of salivary gland
- To determine treatment delivered to the patients with the disease

3. LITRATURE REVIEW

From January 1, 1998, to December 31, 2008, the records and data of 316 patients who underwent surgery at Kaohsiung Medical University Chung-Ho Memorial Hospital were retrospectively evaluated. There were 281 individuals with benign disease (88.9%) and 35 patients with malignant disease (11.1%). Pleomorphic adenoma was the most prevalent benign disease (115 cases, or 36.4 percent), whereas Warthin's tumor was the most common condition in male patients, a finding that had not before been described in the literature. The most prevalent malignant illness was acinic cell carcinoma (8 cases, 22.9 percent).(6)

From March 2000 to March 2015, a retrospective study was undertaken on salivary gland cancers detected at two pathology centers of Shahid Beheshti University of Medical Sciences in Iran. The key analysis end indicators were patient age, sex, tumor site and frequency, as well as clinical and radiographic characteristics and histopathologic diagnosis. 6065 (13.3 percent) of the 45429 biopsies performed over 15 years were oral and maxillofacial lesions, with 937 (15.4 percent) of them having tumor diagnosis. 184 (19.6%) of the 937 tumor cases were salivary gland tumors, including 65 (35.3%) benign tumors and 119 (64.7%) malignant tumors among them. The most common tumor was pleomorphic adenoma, which accounted for 32.6 percent of all tumors, followed by mucoepidermoid carcinoma (27.1 percent) and adenoid cystic carcinoma (22.2 percent). Tumors were reported on a regular basis.(7)

From 1995 to 2016, a retrospective analysis of salivary gland cancers detected at two pathology clinics at Federal University Santa Catrina, Brazil, was done. The age and gender of the patients, as well as the location and frequency of tumors, histological diagnosis, and symptomatology, were all assessed. A total of 124 salivary gland tumor cases were discovered, with 81 (65.3%) of them being benign and 43 (34.6%) being malignant. The parotid gland was the site of the majority of malignancies (57.2 percent). The most prevalent benign was pleomorphic adenoma (59.6%), followed by adenocarcinoma not otherwise defined (8.8 percent). Women (54.8 percent) were more likely than men to develop malignancies (45.2 percent). Pain was linked to malignant tumors in 31.4 percent of cases (p0.05).(8)

A retrospective cross sectional investigation conducted in the department of Oral and Maxillofacial Surgery of the Medical Centre Leeuwarden was made between two groups. The first group which was taken from February 1982 to June 1996 yielded 67 salivary stones. These patients ranged in age from 37 to 79 years old, and all of the stones came from the ducts of the submandibular salivary glands. In the second group data was taken between March 1997 and September 2012 resulting of 88 salivary stones from 87 patientsThe average age of patients in a case of 87 patients was 47 years, with ages ranging from 8 to 87 years. Nine (10%) of the salivary stones in this series came from the parotid gland, whereas 69 (78%) came from the submandibular salivary gland, with 36 percent coming from the left side and 52 percent coming from the right. (9)

The study looked at the demographic and clinicopathologic characteristics of salivary gland cancers treated at a Turkish tertiary referral medical hospital. The data of 510 individuals with salivary gland malignancies treated between January 1984 and May 2012 was retrospectively evaluated. Only salivary gland-derived primary neoplasms were included. 352 (69.0 percent) of the 510 neoplasms were categorized as benign, while 158 (31.0 percent) were classified as malignant. Males predominated, with a male:female ratio of 1.23 (281/229). The parotid gland (372/510, 72.9 percent) was the most common location, followed by minor salivary glands (97/510, 19.0 percent) and submandibular gland (40/510, 7.9%). The malignancy rates in the parotid, submandibular, and minor salivary glands were 21.5, 40.0, and 56.7 percent, respectively. The oral cavity (61/97, or 62.9 percent) was the most common site for small salivary gland neoplasms. Pleomorphic adenoma (PA) was the most prevalent histological type in the entire study group, as well as among pediatric patients (45.3 percent). Adenoid cystic carcinoma (39/510, 7.6%) and mucoepidermoid carcinoma were the most prevalent malignant neoplasms (5.7 percent). Men are more likely than women to have salivary gland tumors. When compared to parotid gland neoplasms, the rate of malignancy in minor gland neoplasms is nearly three times higher. PA is the most prevalent type of histopathological tumor in all age groups and in all sites.(10)

A retrospective analysis was conducted on patients who visited the Department of Oral Medicine Seveetha Dental collage, India from March 2019 to March 2020 .In this study 17 patients who were diagnosed with salivary gland disorders were reviewed and included in the study. The frequency distribution of age of the patients who were diagnosed with salivary gland disease included 5-15 years(11.76%),15-25 years(23.53%), 25-35 years(11.76%),35-45 years(11.76%),45-55 years(5.88%),55-65 years(29.41%) and 65-75 years(5.88%). The frequency distribution of sex showed slightly higher male presentations (52.94%) than females(47.06%).And the chief complaint present in majority of patients were swelling in the lower lip(35.29%),followed by dryness of the mouth(17.65%) and swelling below the tongue(11.76%). Excisional biopsy (47.06%) was the most commonly undergone management followed by topical wet mouth rinse (23.53%), antibiotic therapy (17.65%) and topical steroid therapy (11.76%) in patients who were diagnosed with salivary gland disease.(11)

From January 2000 to December 2010, a retrospective study on epidemiological and histopathological patterns of salivary gland tumors was conducted in nine Pathology services of different hospitals in Yaoundé, Douala, and Bamenda, Cameroon. The findings revealed that 21.9 percent of the tumors were malignant, while 78.1 percent were benign. The average age was 37.44 years, with extremes ranging from 1 to 84. Pleomorphic adenoma was the most common benign tumor (60.36 percent), while adenoid cystic carcinoma (31 percent), mucoepidermoid carcinoma (22.4 percent), and adenocarcinoma (19 percent) were the most common malignant tumors. The minor salivary glands were mostly involved in the palate (66.7 percent), cheek (30 percent), and lips (3.3 percent). (12).

Retrospective study conducted to describe the demographic characteristics, site distribution and histological patterns of SGT at a University teaching hospital in Kenya .Total of 2426 biopsies were taken from head and neck tumour. Of this 132 were SGTs and the age range was between 8 to 80 years with mean age being 43.6 years. The overall male to female ratio was almost 1:1. However, there were more females than males with benign SGTs, whereas an equal gender distribution was noted in malignant SGT.

Tumors arising from minor salivary glands (MiSG) were twice (67%) than that from the major salivary glands (MaSG) (33%). The sites most affected for the(MiSG) was the palate and for the MaSG was the submandibular gland. Pleomorphic salivary adenoma (PSA) was the most common benign SGT(40.2%) while adenoid cystic carcinoma) (ACC) was the most frequent amongst the malignant type(20.5%). (13).

In a case control study done on 208 patients to assess the association of Systemic diseases and the risk of developing salivary stones, none of the recorded systemic diseases was more prevalent in patients with salivary stones.Patients with salivary stones used significantly more antibiotics compared with the control group (P = .037). No significant differences were observed for other types of medication. There was no correlation between salivary stone formation, smoking, and alcohol consumption .Of the patients diagnosed with salivary stones, the submandibular gland was affected in 85.6% of the patients, the parotid gland in 9.6%, and the sublingual gland in 2.4% of the patients.(14).

A 10 year retrospective cross sectional study conducted based on the biopsy material collected in the Department of Pathology, Addis Ababa University (AAU)in Ethiopia, confirmed that patterns of salivary gland tumors closely follow the pattern seen in other African countries. Of all salivary gland tumors, parotid gland accounts for 43.2%, submandibular gland account for 25% and the rest of all minor salivary glands contribute for 31.9%. Out of 176 tumors, 117 were reported to be benign and 59 were malignant and pleomorphic Adenoma forms 58.5%of all tumors.(15)

1.3. SIGNIFICANCE OF THE STUDY

A variety of neoplastic and inflammatory illnesses can affect the salivary glands. Virus or bacterial infections, granulomatous illnesses, and autoimmune diseases can all cause inflammation.

There are many patients who come to our clinic with various concerns connected to salivary gland disorders, such as infections, stones, and tumors. There are, however, no statistics on the prevalence and pattern of this illness.

As a result, the goal of this study is to determine the prevalence and pattern of salivary gland illnesses among patients seen at the two hospitals (OMFS Department).

Furthermore, the study will serve as a starting point for individuals who wish to conduct further research on the same topic, as well as providing information to policymakers.

METHOD & MATERIAL

4.1 Study area and period

A retrospective cross-sectional study was conducted on all salivary gland disease patients at AAU department of oral & maxillofacial surgery & St. Peter hospital, in Addis Ababa Ethiopia

Addis Ababa is capital city of Ethiopia which is few miles from rift valley .It is located9° 0' 19.4436" N with coverage 527km2 with elevation of 2355m.climate characterized by sub tropicalhighland climate .it is one of the principal economic and educational centers with total population of 2,739,551urban and rural inhabitants according to the 2007 population census conducted by the Ethiopian national staticsauthorities(16)

The largest referral hospital in Ethiopia is the TikurAnbessa Specialized Hospital, which is part of Addis Ababa University's School of Medicine, College of Health Sciences. It was founded in 1964 and is now the primary teaching facility for most specialties' clinical and preclinical training. It's also a place where the entire country can get specialized clinical services that aren't available anywhere else, whether public or private. The hospital is serviced by the School of Medicine's numerous departments, faculties, and residents undergoing specialty training. The department of oral and maxillofacial surgery is a relatively new addition to AAU, having launched in 2016. It provides a wide range of diagnostic and surgical procedures. The School of Medicine is linked with nearly all regional and federal hospitals in Addis Ababa.(17)

Data was collected from patient’s records & charts registered from January 2019 to December, 2021.

4.2 Study design

Institution based retrospective Cross-sectional study using structured questionnaires was used to collect data from January 2019–December 2021 G.C.

4.3 Study population

Source population were all patients who visited oral & maxillofacial surgery department of AAU and St. Peter hospital during the study period

Study population - Patient evaluated and managed with the diagnosis of salivary gland diseases in the two hospitals in MFS departments during the study period.

4.4 Sample size determination and procedure

4.4.1 Sample size

All patients evaluated with the diagnosis of salivary gland diseases during the study period with complete medical record were included in the study.

4.4.2 Sampling procedure

From log books/registration books at maxillofacial department who are evaluated and diagnosed with salivary gland diseases during the study period with complete medical record are included in the study consecutively/convenient sampling technique /.

4.5 Inclusion and exclusion criteria

4.5.1 Inclusion criteria–All cases evaluated and managed with the diagnosis of salivary gland disease with complete medical record were included

4.5.2 Exclusion criteria –All patients with incomplete medical record were excluded

4.6 Study Variables

4.6.1 Dependent variable

Salivary gland disease

4.6.2 Independent variable

Socio-demographic factor

Age

Sex

Area

Management

Risk factors (industrial waste exposure,age)

Clinical manifestation (neck swelling, pain, discharge through papilla)

4.7 Operational definitions

Salivary gland disease is wide range of conditions that lead to swelling or pain in the saliva-producing tissues around the mouth

4.8 Data collection procedures and Quality assurance

4.8.1 Data collection procedures

Patients who were evaluated and managed with diagnosis of salivary gland disease were study population. The principal investigator gave a three day orientation for data collectors prior to data collection..

Data was collected by trained dental interns and residents using structured and pre tested questioners assessing socio-demographic characteristics, risk factors and clinical features of salivary gland disease and management of the case.

4.8.2 Quality assurance

Principal investigator cross checked for completeness and accuracy of the data on regular basis both during and after collection of data.

Necessary corrections were made by cross checking with the patients chart.

Data was intensively cleaned before any analysis.

4.8.3 Limitations

Improper documentation and lost registration book

Lost patient cards

Covid 19

4.9. Data analysis

Coding of individual questionnaires was undertaken before data entry in to the software. Data was entered and analyzed using SPSS version 21.0.Descriptive statistics used to

characterize the dependent and independent variables. Quantitative data was presented as number, frequency and percentage

4.10. Ethical consideration

Ethical clearance & permission letter obtained from the Institutional Review Board (IRB) AAU,College of Health Sciences, and Saint Peter Specialized hospital. Confidentiality was maintained during data collection, analysis and interpretation by avoiding recording of names and returning client records to its place after completion of data entry.

4.11 Dissemination of the results

The final result of this research will be submitted to AAU,CHS and department of maxillofacial surgery. The result also will be disseminated as workshop, seminars, to responsible bodies like regional and local health bureau as aid in policy making to combat the disease .Finally it will be sent for publication and peer reviewed by related field for publication

5. RESULT

I. Socio-demographic characteristics

Chart review was performed for fifty seven patients with salivary gland disease at maxillofacial surgery, affiliated hospital. Accordingly, the median age of patients was 33 years .While, fifteen (26.3%) of the participants had age between 31-40 years who are highly affected. While, 36(63.2%) were females. Regarding the patients' residency, 33(57.9%) were from Addis Ababa. Thirty Nine (68.4%) were Orthodox religion followers (See table one given below).

Table 1.Socio-demographic characteristics among patients with Salivary Gland Disease at Addis Ababa University, department of oral and maxillofacial surgery from Jan 2019-December 2021.

Variables	Frequency(n=57)Percentage (%)
Age group	
10-20	9(15.8%)
21_30	13(22.8%)
31_40	15(26.3%)
41-50	8(31.6%)
51-60	6(10.5%)
61-70	4(7%)
>70year	2(3.5%)
Sex	
Male	21(36.8%)
Female	36(63.2%)
Area	
Oromia	17(29.8%)
Addis Ababa	33(57.9%)
SNNP	6(10.5%)
Amhara	1(1.8%)
Religion	
Orthodox	39(68.4%)
Muslim	10(17.5%)
Protestant	8(14.0%)

II. Risk Factors Related Characteristics

In this study the prevalence of chronic diseases among patients with salivary gland diseases were 7% I.e. 4 out of 57. Of those with chronic diseases, 3(75%) were HIV positive and the other is diabetic.With that regard, all of i.e. 4(100%) were on medications. Nonetheless, none of study population had history alcoholism, trauma and exposure to radiation.

III. Clinical Presentation

Swelling as a clinical presentation was apparent among 32(56.1%). Thirty patients (52.6%) had a tumor located sub-mandibular gland. Regarding duration of swelling, 51(89.5%) had duration of greater than one month swelling. Twelve (21.1%) had swelling accompanied by pain. Swelling with meal was apparent among 7 (12.3%). Whereas, 55 (96.5%) had a unilateral type of swelling and one (1.8%) had xerostomia respectively.

IV Location of disease of salivary gland

In this study submandibular gland was most commonly affected (52.6%),followed by parotid(22.8%), and minor salivary glands of oral cavity(19.3%) respectively(see figure 1 below)

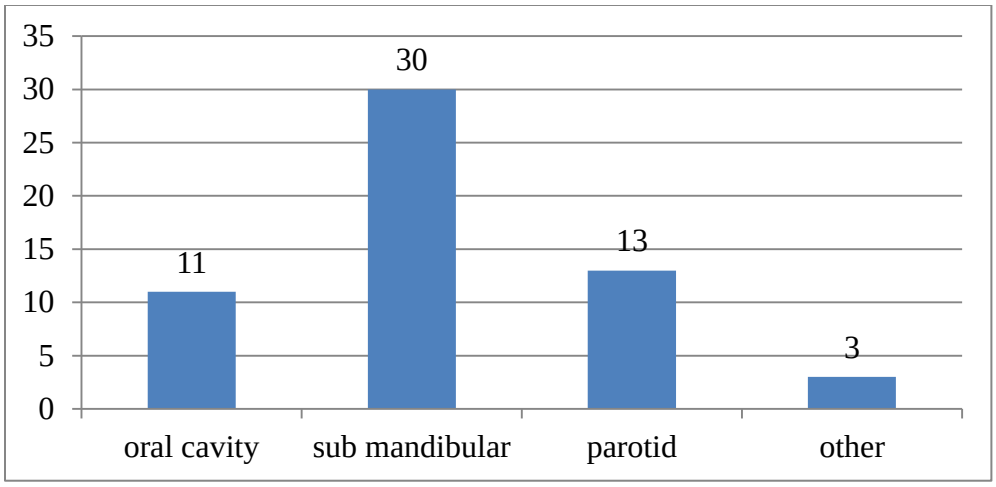

Figure 1. Location of Salivary Gland Disease among patients seen at Addis Ababa University, department of oral and maxillofacial surgery from Jan 2019-December 2021.

V. Diagnosis of Salivary Gland Disease

Sialadenitis was apparent among 17 (29.8%) of patients. Ten (17.5%) and 11 (19.3%) had a diagnosis of benign and malignant type of tumors respectively. Of those with benign type of salivary gland disease, all i.e. 10 (100%) had pleomorphic type tumor. Likewise, of those with malignant type of tumor, 9 (81.8%) were diagnosed with MECA,1(9.1%) adenoid cystic carcinoma and 1(9.1%) acinic cell carcinoma . Regarding diagnostic modality for 31 (54.4%) patients, FNAC&US was employed , followed by FNAC& CT/MRI for 13 (22.8%) patients, and just FNAC for 10 (17.5%) patients, US use for only 3 (5.3%)

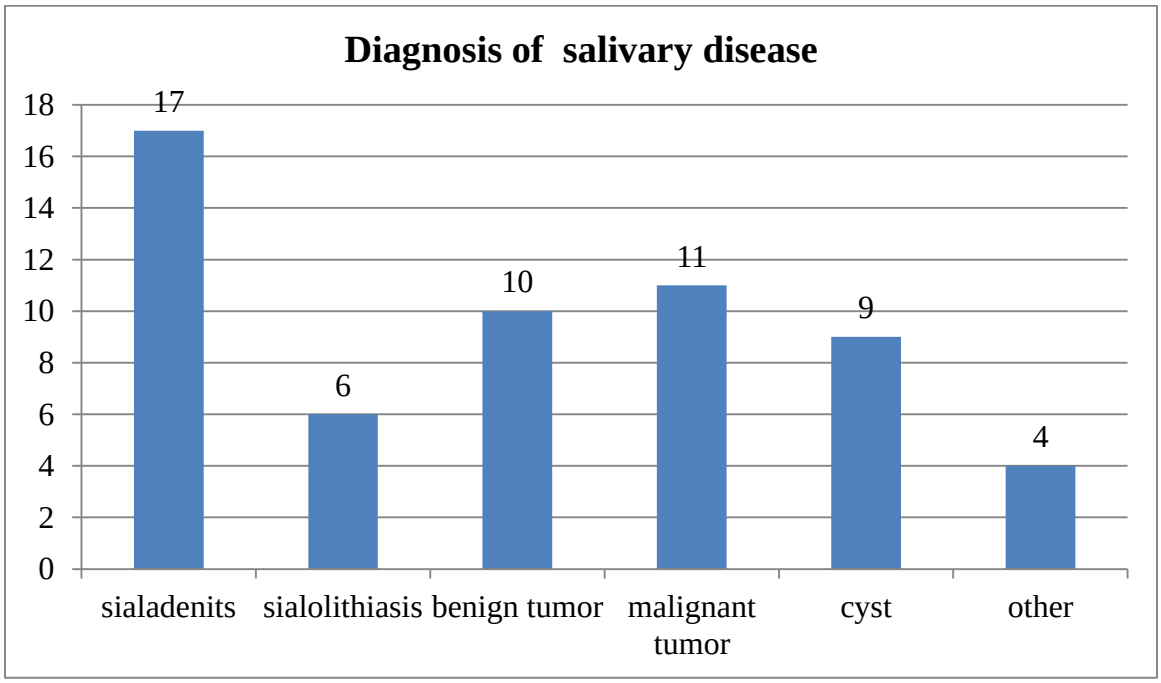

Figure 2.Diagnosis of patients with Salivary Gland Disease at Addis Ababa University, department of oral and maxillofacial surgery from Jan 2019-December 2021

VI. Management Given

Fifty one (89%) patients were treated with surgery (See figure given below).

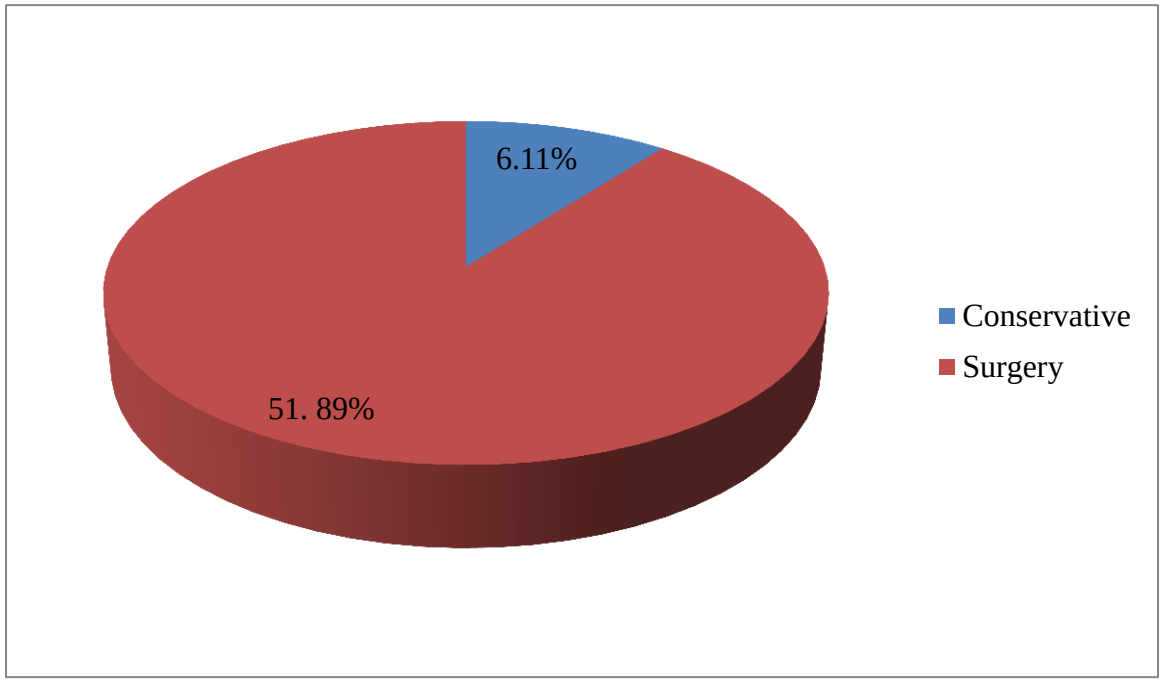

Figure 3.Management patients with Salivary Gland Disease at Addis Ababa University, department of oral and maxillofacial surgery from Jan 2019-December 2021

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VII .Age *Diagnosis cross tabulation

Sialadenities is most common in 31-40 age groups (47%),sialolithiasis(66.6%) is most common in 51-60 age group as compared to other age groups in the study. Benign tumors (pleomorphic adenoma) is more common in age groups 10-20 and 61-70 which is 30% for each groups .Malignant tumors were more apparent in 10-20 age groups (see figure below).

Table- 2 Age *Diagnosis

Variables total(%)	sialadenitis	sialolithisasis	benign	malignant	cyst	other	
Age							Total
10-20	2	-	3	3	2	-	10
21-30	2	2	2	2	4	-	12
31-40	8	-	2	-	1	2	13
41-50	2	-	-	2	-	1	5
51-60	2	4	-	1	1	1	9
61-70	-	-	3	2	1	-	6
>71	1	-	-	1	-	-	2
Total	17	6	10	11	9	5	

6. Discussion

The present study revealed 17 (29.8%) of the diagnosis of salivary gland disease is attributable to Sialadenitis. Also, 10 (100%) of the diagnosis for benign type of tumors are due to pleomorphic adenoma. Nine (81.8%) of the malignant tumors are due to MECA and 1(9.1%),due to adenoid cystic carcinoma ,1(9.1%) is acinic cell carcinoma .Among the nine cases with MECA type of malignant tumor, six were above the age group of greater than 40 years. While, 7 of the 10 cases of pleomorphic adenoma cases of benign tumors were females. Thirty (52.6%) of the salivary gland disease location in the present study was sub-mandibular gland .Cross tabulation performed for sex*disease of salivary gland which do not showed association. Regarding management, fourty nine (86%) of cases were treated with surgery.

The current study revealed Sialadenitis as a commonest salivary gland disease. This study is discordant with four similar studies conducted in China, Iran, Brazil and Turkey that revealed benign tumors as the commonest tumors among patients with salivary gland disease (6-9).

Nonetheless, the finding of the present study is agreeable with above studies and another similar study which have been conducted in UK where, pleomorphic adenoma as a commonest benign tumor (6-10).

Also, a sub-mandibular gland as the commonest site where the salivary gland disease located. This finding is discordant with three similar prior studies conducted in Turkey, UK and Ethiopia which revealed parotid area as a commonest tumor location this could be due to small size sample in our study (9-10, 15).

In this study, seven of the 10 cases of pleomorphic adenoma cases were diagnosed in females. The finding of this study is agreeable with the study conducted in Cameroon where, there were more females than males with benign SGTs (13).

Surgery was the commonest management modality of salivary gland diseases in the present study this was concordant with five similar studies conducted in China, Iran, Brazil, Turkey and Ethiopia (6-9, 15).

Strength

Data collection, clearance and entrance was performed strictly

7. Conclusion

The present study revealed Sialadenitis as a commonest diagnosis for salivary gland diseases. Also, all of the diagnoses for benign type of tumors were due to pleomorphic adenoma. MECA was the commonest malignant tumors. While, pleomorphic adenoma cases of benign tumors were most common among females. The most common location of salivary gland disease in the present study was sub-mandibular gland. Regarding management, surgery was the usual management modality for tumors.

8. Recommendation

To university –university should give attention for this disease so that father study may show real effect like morbidity and mortality which could be prevented if awareness is given to the public.

To ministry of health-Burden of salivary gland disease has many (morbidty,mortalty ,cost) and ministry of health should take in to account so that awareness could be created to the public about salivary gland disease .

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ለ፣ ቅዱስ ጴጥሮስ ስፔሺያዝድ ሆስፒታለ
ሜዲካል ዳይሬክተር

ጉዳዩ፣ ትብብር መጠየቅን የመለከታል

ከላይ በርዕሱ ለመጥቀስ እንደተሞከረው ዶ/ር ሚሊዮን በየን በአዲስ አበባ ዩኒቨርሲቲ በጥርስ ህክምና ት/ት ክፍል ዉስጥ የ4ኛ ዓመት የማግዚሎ ፊሺል ሰርጀሪ ሰፐሺያሊቲ ትምርታቸዉን እየተማሩ ይገኛሉ፡፡

በመሆኑም የመመረቂያ ጽሁፋቸዉን እየሰሩ ስለሆነ ጥናታቸዉን ለመስራት ዳታ ከናንተ መሰሪያ ቤት በማግዚሎ ፊሺያል ሰርጀሪ ህክምና ክፍል ዉስጥ ማድረግ ስለፈለጉ ትብብር እንዲደረግላቸዉ በአክብሮት እንጠይቃለን፡፡

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