

Demographic presentation of odontogenic myxoma among patients attended at Muhimbili National Hospital from 1990 – 2002 By MAZYALA E.J.

Abstract

The aim of the study was to determine the demographic presentation of odontogenic myxoma among patients attended at Muhimbili National hospital over a period of twelve years 1990 – 2002. This was a retrospective, cross-sectional study conducted at the School of Dentistry MNH during the months of July and August 2003. Medical records and histopathological results of all patients who had odontogenic tumours were scrutinized.

Information regarding age, sex, address and site of tumour were recorded. Also, the signs and symptoms at presentation to hospital were recorded.

In this study, twenty four cases of odontogenic myxoma were found. They accounted for 10.6% of all odontogenic tumours, thus ranked the 2nd most attended odontogenic tumour in twelve year period, the 1st one being Ameloblastoma (72.2%). In this study odontogenic myxoma was found to occur in children below ten years old. There was female preponderance, but a lack of mandible predilection. The most affected age group was in the 2nd and the 3rd decade of life. From this study, it is evident that the occurrence of odontogenic myxoma among other odontogenic tumours was substantially high.

INTRODUCTION

Odontogenic myxoma is a non-encapsulated benign tumour of the jaws that occurs very rarely(1). It is a slowly growing tumour formed by an accumulation of mucoid ground substance with little collagen, the amount of which determines whether it can be called a myxofibroma (2,3). Only occasionally does odontogenic myxoma show the presence of odontogenic epithelium (2,4).

The origin of odontogenic myxoma is believed to be the mesenchyme of a developing tooth or the periodontal ligament (3,5-6). Some authors had previously associated its origin with a myxomatous change of an odontogenic fibroma (7) or residual foci of embryonic tissue (8). From the available literature it is still arguable whether odontogenic myxoma is truly an odontogenic neoplasm. However, its histological similarity to the stellate reticulum of a developing tooth, its exclusive occurrence in close proximity to the tooth bearing parts of the jaws, the occasional association with a missing or unerupted tooth, the presence of odontogenic epithelium in a minority of cases and the fact that it rarely appears in other parts of the body skeleton, offer support to an odontogenic origin (9,10).

There are few reports on the relative frequency and incidence of odontogenic myxoma in the available literature. Barros et al (11) found 95 reported cases of myxoma of the jaws in twenty-six years and reviewed twenty six of them. Sillotweg and Wittkampf (12) reviewed 15 cases of odontogenic myxoma collected over a thirty years period. Muzio et al (13) reviewed 10 cases retrieved from the archives of four Universities. Studies from the African continent have shown odontogenic myxoma to occur with relative frequencies between 1 and 15% among odontogenic tumours (14-18). Chinese authors reported relative frequencies ranging from 1 to 8.4% (19, 20). American and European authors have reported relative frequencies of odontogenic myxoma ranging from 0.5% to 17.7% (21-23).

Although odontogenic myxoma has been reported from several countries, many of the available reports were either single case reports or a series of few cases only which are not suitable enough to give a reliable demographic presentation of the disease. In Tanzania Simon et al (24) reported that odontogenic myxoma constituted 8.6% of all odontogenic tumours seen in 12-years period at four referral hospitals. However, not much of demographic presentation of the tumour has been studied in Tanzania.

Therefore, the aim of this study was to determine the demographic presentation of odontogenic myxoma among patients attended at Muhimbili National Hospital over a period of twelve years.

MATERIALS AND METHODS

The current study was a cross sectional retrospective study conducted at School of Dentistry and Muhimbili National hospital.

The histology reports and files of all patients who had odontogenic tumours from 1990 – 2002 at the Oral Surgery department of School of Dentistry and the reports of the histopathology laboratory of Muhimbili National Hospital (MNH) were scrutinized to identify those with odontogenic myxoma. The age and sex of the patients, and site of the tumour at presentation to hospital and accompanying symptoms were retrieved and recorded.

Data were collected by (EJ) using special forms. Sampling procedures were not performed, instead, all available records were scrutinized. Patient's names were not recorded, only hospital registration numbers were used for confidentiality. Then collected data were entered into a computer and analysed using Epi info 2002 computer programme. Chi-square test was

used for determining the preponderance of odontogenic myxoma for age, sex and site.

RESULTS

A total of twenty-four cases of odontogenic myxoma were found. In eight patients, the anatomical site was not indicated, and the sex of 3 patients was not known. The specific ages of four patients were either not indicated at all or were written, as adult therefore were not available. The information of the rest patients was found from the available files and histological reports.

Ameloblastoma was the most frequent tumour (72.2%) followed by odontogenic myxoma (10.6%) and Cementoosifying fibroma (6.2%), (Table 1).

Females were the most affected group (70%) females (Table 2). The 2nd and 3rd decades were most commonly affected, while age group below ten and above thirty were least affected. Apparently, there was no site predilection. In 8 patients the tumour was on mandible, in 8 on the maxilla and in 8 patient the site were not indicated (Table 3).

DISCUSSION

Worldwide odontogenic myxoma has been reported with regards to age at presentation, sex distribution, and clinical pathological presentation. Despite of socio-economic differences, the results of this study parallel other published findings. The finding from this study that odontogenic myxoma ranked the 2nd among other odontogenic tumours, is in agreement to other studies done in Africa (16, 24) as well as that done in China (19).

Most odontogenic myxoma cases were found in the 2nd and 3rd decades of life. This is in agreement with other studies (16, 24). Unlike in other studies (16, 24), the findings of this study showed that odontogenic myxoma occurred in children below ten years old. The age groups beyond thirty years were least affected which implies that, odontogenic myxoma affect children and young adults.

In this study, females were more affected compared to their males counter parts. This finding agrees with another previous study done in Tanzania as well as in Kenya (24, 16). There is so far no scientific explanation for female preponderance.

There was no site predilection for the mandible, contrary to many studies (16, 24). Of twenty-four cases, 33.3% were on mandible; 33.3% on maxilla and in 33.3% the specific sites were not indicated. The missing information on specific site could have contributed to the observation.

From this study, it is evident that the occurrence of odontogenic myxoma among other odontogenic tumours is substantially high (10.6%) thus need attention. Oral health workers should do regular

screening of most affected regions so that cases can be detected and treated early.

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Availability of snacks and drinks within primary school premises in Ilala District, Dar es Salaam. By KAHABUKA F.K

ABSTRACT

This study was a cross sectional census survey of 44 government primary schools carried out to investigate the availability of snacks and drinks within school premises in Ilala municipality, Dar es Salaam. The required information namely reasons for establishing a place for selling snacks and drinks, types of snacks and drinks sold, customers and selling times was gathered by the author through interview and passive observations. The information collected was filled in open ended questionnaires. Subsequently, the information was coded and analyzed using an Epi Info programme 2002. At almost all schools (86%), there were small shops selling a variety of snacks and drinks to school children. At nearly half of the schools (48%) confectioneries were being sold. Apart from the small shops within school premises, there were vendors in the neighbourhood of some schools (27%) also selling snacks and drinks. It is recommended that availability of snacks and drinks to school children be monitored in order to control their frequency of sugar consumption.

INTRODUCTION

The relationship between frequency of eating sugar containing foods and incidence of dental caries was demonstrated in the Vipeholm study in 1954 (1). Thereafter, cumulative evidences have shown a positive relationship between frequency of sugar consumption and incidence of dental caries (2). On the other hand, the frequency of sugar consumption is related to availability of sugary products (3, 4). For example, availability of sugar containing snacks and drinks within school premises has been reported to increase children's risk for dental caries (5, 6).

In Tanzania, the availability of confectioneries has increased in recent years, and their prices are relatively low. Although Tanzanian children are reported to have very low caries experience, DMFT being 0.4 among 12 year olds (7), the DMFT may increase if sugary snacks and drinks will be available within school premises. Given that there is no information on the availability of sugary snacks and drinks to school children in Tanzania, this study was carried out to investigate the availability of sugary snacks and

drinks within school premises in Ilala, Dar es Salaam.

MATERIALS AND METHODS

A cross sectional census survey of 44 government primary schools was carried out in Ilala. Prior to the visit, school authorities were informed and appropriate appointments were made. All the information was gathered through interview and observations. The author interviewed domestic science teachers and recorded the following information in an open-ended questionnaire; reasons for establishing a place for selling snacks and drinks, types of snacks and drinks sold, customers and selling times. After the interview, the author visited the shops and passively observed the items that were being sold. Availability of vendors in the school surroundings, selling snacks and drinks to school children was noted.

The qualitative information collected was coded before being entered into a computer and analyzed using an Epi Info programme 2002.

RESULTS

Snacks and drinks were available at small shops within premises of 38 primary schools (86%). In addition, vendors selling snacks were found in the neighbourhood of 12 schools (27%). At six schools (14%) there were no snacks or drinks being sold to children (Table 1).

The main reason for establishing a place to sell snacks or drinks was a need to monitor children's safety against road accident and to prevent children from eating contaminated foods. Other reasons were; a source of generating income to schools, a way of safeguarding attendance as well as improving children's vigilance in classes. Customers at all shops were mainly pupils and teachers, and occasionally people neighbouring the schools. Children were allowed to buy snacks or drinks twice a day, during break time (Table 2).

Out of 38 schools where snacks and drinks were sold within school premises, at 36 schools (95%) at least one sugar-containing snack or drink was being sold, at 31 schools (81%) ice juice generally called "ice cream" was being sold, at 30 schools (79%) sugary snacks and at 17 schools (48%) confectioneries were being sold (Table 3). Both home made and industrially

produced snacks and drinks were available, (Table 4).

DISCUSSION

In Ilala municipality, a few schools are located in rural settlements such that the results of this study may not reflect a general situation prevailing at all schools in Tanzania. Moreover, the results provides useful baseline information.

At most primary schools in the Ilala municipality sugary snacks and drinks were being sold within their premises. Over half of the places selling snacks or drinks were established at least two years after trade liberalization. Following trade liberalization in 1985, importation of various goods including food was allowed. This act increased the availability of confectionaries especially in urban areas which may have influenced opening of places to sell snacks and drinks within school premises.

The percentage of schools that had a place where at least one sugar containing snacks or drink was being sold within school premises in this study (82%) is higher than 76% reported within South Australian schools (6). This difference may be attributed by differences in life styles. The main reason for establishing places to sell snacks or drinks within school premises reported to be a need to monitor children's safety and the reasons for closing school shops reported to include financial problems may not be applicable in Australia.

The fact that customers to all places selling snacks or drinks within school premises were mainly school children and their teachers, create an opportunity for increased sugar consumption. This may put them at an increased risk of developing dental caries. For this reason, it is essential for Tanzania to control children's sugar consumption as Moynihan (2) allegedly stated; it is important that countries with low intake of free sugars do not increase intake.

Vendors in school neighbourhoods pose an additional risk to children who buy snacks and drinks from them. Thus, their activities should be monitored concurrently with measures directed

to snacks and drinks sold within school premises. A similar recommendation to control vendors around schools was suggested by the American Academy of Paediatric Committee on School Health (8).

From these results it is concluded that most primary schools in the Ilala municipality have a place within school premises where at least one sugar containing snack or drink is sold to pupils. It is recommended that availability of snacks and drinks to school children be monitored in order to control their frequency of sugar consumption.

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Table 1: Availability of snacks and drinks within school premises and in the school neighbourhood

Availability of snacks or drinks	Available		Not available	
	Number	%	Number	%
Within school premises	38	86.4	6	13.6
Vendors in the school neighbourhood	12	27.3	32	72.7

Table 2: Reasons for establishing a place to sell snacks or drinks, customers and selling time

	Number of schools	%
Reasons for establishment		
To monitor children's safety	15	39.5
A source of income to school	8	21.0
To monitor children's attendance	8	21.0
To improve children's vigilance in class	7	18.4
Reasons for not establishing or for closing		
Financial problems	2	5.3
A Minister's directive campaigning against cholera	2	5.3
A dentist's advise	1	2.6
Food served in school canteen	1	2.6
Customers		
Pupils	38	100
Teachers	37	97.4
Neighbours	16	42.0
Opening times		
Once per day	9	23.7
Twice per day	27	71.0
Thrice per day	2	5.3

Table 3: Types of sugar containing snacks or drinks available within school premises

Type of snack or drink	Number of schools where snacks and drinks were sold	%
Ice cream (Ice juice)	31	81
Sugary snacks	30	79
Confectionaries	17	48
Sugary soft drinks	13	34

Table 4: Sources of snacks and drinks (n = 36)

Source	Sugary snacks	Salty snacks	Sugary drinks
Home made	7 (19.4%)	16 (44.5%)	2 (5.6%)
Industrial	6 (16.7)	3 (8.3%)	2 (5.6%)
TOTAL	13 (36.1)	19 (52.8%)	4 (11.1%)