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Research Article

The Pattern of Patient Attendance to Dental Clinics at Muscat Public Health Centres

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Abstract

Objectives: This is a cross-sectional descriptive study to provide baseline information about the causal pattern of patient attendance to public health centre's dental clinics.

Methods: There are five main districts in Muscat city (Amerat, Al-Hail, Al-Khuwair, Muttrah and Muscat). To understand the pattern of patient attendance to public health centres, 5 centres randomly selected from each districts and their patients attendance records at each public health centres between January 2010 and December 2010 were collected. The total number of patients attended seeking dental treatment at all centers were 7464 during this period.

The causal pattern of patient attendance as reported at each dental center records was categorized with respect to the patients age (children below the age of 15 and adults 15 and above) and gender (Adults male and female).

Results: Based on data collected from dental records, it was found that patient attendance due to dental caries was highest in children at all five dental clinics. As for adults, patient attendance due to dental caries was the highest followed by gingivitis and periodontal inflammatory conditions.

The pattern of patient attendance was different between children and adults, men and women and different regions.

Conclusion: The pattern of patient attendance at the five dental clinics of government health centres are not the same. They are not only different from region to region but also they are different between children and adults, and in adults also it is different between males and females.

Keywords: Patient Attendance; Dental Clinics; Muscat; Oman

Introduction

Oral public health has become one of the main focus of Oman's national health system in the last few years. Gathering information and building national health data base is an essential step in planning public oral health programs. Such studies can help the public health planners to seek for possible causes of prevalence of dental diseases in certain areas or within certain population. Hence can have an impact in finding the right solutions to prevent the common dental diseases. It is a well known fact that prevention is better than cure.

Implementing preventive measures will lead to better dental hygiene in society and less treatment cost for public and government. Such studies performed at regular intervals could also show the improvement rate of dental hygiene in the population under study. Few such serial studies have already been undertaken in Oman [1-3].

Dental Caries and periodontal (gum) diseases frequently reported as the most prevalent causes of oral diseases, this is in consistent with other studies that reported the same else where [4]. According to Centre for Disease Control USA these conditions are preventable. It is stated that these are painful and common problems in society which not only create a great burden financially on the government and society, but also if they persist in chronic form, it can lead to complications and systemic diseases such as cardiac and gastrointestinal diseases [5].

Introduction

- Dental caries is a common, preventable problem of all ages and sexes. Untreated cavities can cause pain, dys-

function, and absences from work and school, difficulty concentrating, and poor appearance. These lead to problems that affect a person's quality of life. Multiple studies about dental caries have been carried out [3,6].

- Periodontal disease and gingivitis are infectious diseases caused by bacteria invading and destroying gum tissues and bone. Teeth become loose; patient may not be able to chew the food and ultimately might even loose the tooth. Gum disease may also be related with diabetes, heart disease, stroke, preterm delivery and low-birth weight infants.

Aim

This study is aimed to provide baseline information about the causal pattern of patient attendance at five public health centre's dental clinics selected randomly from different districts of Muscat, from January till December 2010. Therefore, a comparative study of patient's attendance due to dental caries, gingivitis and periodontal inflammatory conditions undertaken to understand the relation of each condition to respective public health centre considering the age and sex of the patients in that district.

Materials and Methods

Study population: Based on the dental records collected from each dental clinics at five randomly selected health centers in Muscat city (Amerat, Al-Hail, Al-Khuwair, Muttrah and Muscat), the number of patients attended at each centres seeking dental treatment from from January to December 2010, is stated as below (Table1);

Dental Clinics	Number of patients attended
Amerat H.C*	1115
Al-Hail H.C*	1448
Al-Khuwair H.C*	1070
Muttrah H.C*	1736
Muscat H.C*	2195
Total	7464

Table 1: Distribution of Patients at each public health centers dental clinics.

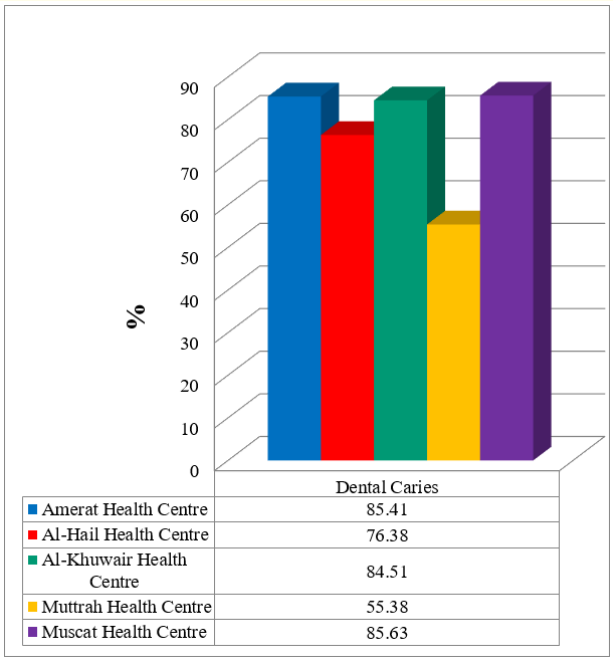
* H.C abbreviates Health Centre

Data analysis

The cause of patient's attendance during year 2012 analysed. The results were studied and pattern of patient attendance to the five health center dental clinics were compared according to age and categorized into subgroups of children (patients below the age of 15) and adults. Their gender variation also considered.

Results

Based on data collected from dental records, it was found that patient attendance due to dental caries was highest in children below the age of 15, at all the five dental clinics ranging from 55.38% in Muttrah to 85.63% in Muscat health centers' dental clinic (Graph 1).



Graph 1: Children Patient Attendance Percentage to Amerat, Al-Hail. Al-Khuwair, Muttrah and Muscat Dental Clinics.

Similarly in adults, dental caries was the main reason of attendance at all the five dental clinics, which is followed by gingivitis and periodontal inflammatory conditions.

Comparative analysis of the adult patients attendance data presented;

- Highest percentage of patient attendance due to dental caries was reported from Muscat (72.81%). Whereas, the percentage of periodontal inflammatory conditions was the lowest in Muscat (0.59%).
- Highest percentage of patient attendance due to gingivitis was reported from Amerat (17.04%) whereas it is the lowest in Alkhuwair (11.21%).
- Muttrah health center had the highest percentage of periodontal inflammatory conditions (12.11%) and the lowest percentage of dental caries (50.06%) (Graph 2).

Graph 2: Pattern of Adult Patient Attendance to Amerat, Al-Hail, Al-Khuwair, Muttrah and Muscat Dental Clinics.

Graph 4: Pattern of Female Patient Attendance to Amerat, Al-Hail, Al-Khuwair, Muttrah and Muscat Dental Clinics.

Comparative analysis of male and female patient attendance to the five dental clinics with respect to dental caries, gingivitis and periodontal inflammatory conditions indicated that;

- In consensus to general trend, dental caries, gingivitis and periodontal inflammatory conditions were the most common reason of both male and female patients attendance in descending order at all the dental clinics except Muttrah. In Muttrah percentage of both male and female patients with periodontal inflammatory conditions was higher than that with gingivitis (Graph 3 and Graph 4)
- Dental caries was more common in males than females in Muttrah. On countrary, it was more common among females in Amerat, Al-Hail, Alkhuwair and Muscat health centres' dental clinics.
- Gingivitis was more common in males than females in all dental clinics except Alkhuwair.
- Periodontal inflammatory condition was more common in males than females in all dental clinics except Muscat.

Graph 3: Pattern of Male Patient Attendance to Amerat, Al-Hail, Al-Khuwair, Muttrah and Muscat Dental Clinics.

Discussion

According to WHO evidence based records, dental caries and periodontal diseases are the most common causes of patient attendance to dental clinics worldwide and prevalence of dental caries is greatest in children. The distribution and severity of oral and dental diseases vary among different parts of the world and within the same country or region, it varies considerably from one country to another, regions and social and ethnic backgrounds [4].

Our study results are consistent with the above mentioned records. Irrespective of age and gender, the majority of patients attended the dental clinics due to dental caries, which is followed by gingivitis and periodontal inflammatory conditions in adults in descending order. However there were some local variations. For instance, in Muttrah Health Center the percentage of periodontal inflammatory conditions was higher than gingivitis.

Amongst all the health centers, Muttrah had the highest patient attendance for periodontal inflammatory conditions and the lowest patient attendance for dental caries, whereas Muscat health center had the highest patient attendance due to dental caries and the lowest patient attendance due to periodontal inflammatory conditions. This proves that there must be some regional, social and ethnic factors involved to bring about these variations.

In respect to gender difference, in most of the health centers patient attendance due to gingivitis and periodontal inflammatory conditions were more common in male than female.

It is recommended that the possible causes or reasons for the variations in the pattern of dental patient attendance in Muscat region to be further explored.

Conclusion

- The causal pattern of patient attendance at dental clinics in these five health centres is not the same.

- Generally, dental caries is the commonest cause amongst the oral and dental diseases in all five health centres, followed by gingivitis and periodontal inflammatory conditions.

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Advances in knowledge

This research provides base-line information about the causal pattern of patient attendance that could prepare solid ground for future studies and public health planning in the Sultanate of Oman. Specific hypothesis about causal patterns can be formulated and analyzed.

Application to patient care

Possible causative factors of the existing prevalence can be sought and preventive measures can be planned to improve public oral health and to control chronic dental diseases which may otherwise lead to serious systemic diseases. Planning to prevent chronic dental diseases will improve the general health of the public as well as it will avoid expenses imposed on society and government for treating these conditions.

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