

Report

Reasons for tooth extraction among patients in Sebha, Libyan Arab Jamahiriya: a pilot study

A.K. Hassan¹

SUMMARY We investigated the causes of tooth extraction among patients in Sebha in southern Libyan Arab Jamahiriya. A total of 600 patients who had undergone tooth extraction were surveyed. We found more males (66%) than females had had teeth extracted and also patients with no education (53%). Caries and periodontal disease were the main causes of tooth extraction. For those patients who opted for tooth extraction over other treatment, they mostly did so for financial reasons. There was generally poor oral hygiene and oral knowledge, which should be tackled

Introduction

Tooth extraction should be the last option of dental treatment; however, it is often the first to be used [1–3]. Sebha is the largest city in the south of the Libyan Arab Jamahiriya and is in the middle of Libyan desert. People come to Sebha from the various urban areas surrounding it and therefore it has a heterogeneous society with a low level of health education.

Many studies have been carried out worldwide which have investigated the reasons for tooth extraction [4–8]. Most of these studies have blamed caries and found that periodontal diseases were the main causes of tooth extraction.

While the high frequency of extractions in this area indicates the presence of oral health problems, no previous study of dental needs and treatment has been performed. This paper describes a pilot study in the Sebha area.

Materials and methods

A simple clinical survey was performed of 600 patients who received extraction treatment in the dental section of the Libyan Red Crescent clinic in Sebha during a period of 7 months. A survey form was adapted from the American Dental Association diagnosis and treatment forms and a careful examination of each case was made before extraction. The results are given in Tables 1 and 2.

Results and discussion

It was found that only 9% of the patients made regular visits to the dentist. The highest incidence of extraction was among uneducated patients (53%), whereas the extraction rate was 12% among university graduate patients and 25% among those with primary-school education. Surprisingly, 42% of the extractions were suggested

¹Dental Faculty, Baghdad University, Baghdad, Iraq.
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Table 1 Extraction distribution according to sex and age

Age (years)	Males		Females		Total	
	No.	%	No.	%	No.	%
15-30	288	48	108	18	396	66
30-60	120	20	84	14	204	34
Total	408	68	192	32	600	100

by the patients and performed at their request rather than at the dentist's request. This clearly illustrates the effect of poor oral and health education.

The primary causes of dental extraction were due to pulpal (34%) or periapical (57%) involvement, periodontal causes (41%), traumatic tooth fracture (38.3%) or impaction (8.5%). Unfortunately, moderate to extensive dental caries, which could have been treated conservatively, were found among the extracted teeth (13%). Few extractions were performed in cases in which the patient needed a prosthetic solution (2%) or orthodontic treatment (0.1%) or had cosmetic concerns (0.2%).

Many cases had multiple reasons for treatment. Many of the extracted teeth could have been saved through endodontic and periodontal therapy but extraction was chosen by the patient for financial reasons (58%), insufficient time (20%) or transportation difficulties (22%).

There were more extractions among men (68%) than among women (32%). There were more men under 30 years of age (48% of total) than men between 30 years and 60 years of age (20%). In all, 18% of the patients were women under 30 years of age and 14% were women between 30 years and 60 years of age. This distribution could be explained by differences between the sexes with regard to the importance of aesthetics. It also draws attention to poor

Table 2 Characteristics of patients and their extractions

Characteristic	Percentage
<i>Education</i>	
Primary	25.0
University	12.0
None	53.0
<i>Visits to dental clinic</i>	
Regular	9.0
Irregular	91.0
<i>Extraction</i>	
Patient requested	42.0
Dentist requested	58.0
<i>Reason for choosing extraction rather than other treatment</i>	
Finances	58.0
Transportation	32.0
Insufficient time	20.0
<i>Dental problem</i>	
Caries	54.0
Dentinal caries	13.0
Pulpitis	34.0
Failed restoration	7.0
Traumatic fracture	38.3
Periodontal causes	41.0
Periapical causes	57.0
Prosthetic causes	2.0
Orthodontic causes	0.1
Cosmetic concerns	0.2
Impacted teeth	8.5
<i>Teeth extracted</i>	
Anteriors	10.0
Premolars	23.0
Molars	67.0

education and dental health care which may make extractions more common among younger patients than among older patients and might be due to the increase of risk of caries and periodontal disease.

Most of the teeth that were extracted were molars (67%); 23% were premolars and only 10% were anteriors. This might be explained by the fact that molars are more involved in mastication and thus exposed to

a greater risk of caries. There may also be a greater effort to preserve anteriors and premolars for aesthetic reasons. This finding concurs with other reports elsewhere in the world [4-9].

The study confirmed that caries (54%) and periodontal disease (41%) are the main causes of tooth extraction.

Recommendations

The present study found low levels of oral hygiene and education as well as a need for

improvement of governmental dental services including personnel, techniques, materials and monitoring, which should offer affordable dental treatment to patients. A larger population study is recommended that would include all dental clinics in Sebha. Furthermore, there is a need for mobile dental units that could travel to the urban areas and schools of Sebha to help patients with socioeconomic problems and which could motivate the people to practise proper dental health care.

References

1. Cawson RA et al. *Essential oral surgery and pathology*, 2nd ed. Edinburgh. Churchill Livingstone, 1990.
2. Schafer WG, Hine MK, Levy BM. *Textbook of oral pathology*, 3rd ed. Philadelphia, WB Saunders Company, 1974.
3. *Dentists' desk reference: materials, instruments and equipment*, 1st ed. Chicago, American Dental Association, 1982.
4. Kay EJ, Blinkhorn AS. The reasons underlying the extraction of teeth in Scotland. *British dental journal*, 1986, 160:287-90.
5. Agerholm DM, Sidi AD. Reasons given for the extraction of permanent teeth by general dental practitioners in England and Wales. *British dental journal*, 1988, 164:345-8.
6. Ainamo J, Sarkki L, Kuhalampi ML. The frequency of extractions in Finland. *Community dental health*, 1984, 1:165-72.
7. Cahen PM, Frank RM, Turlot JC. A survey of the reasons for dental extraction in France. *Journal of dental research*, 1985, 64:1087-93.
8. Corbet EF, Davies WIR. Reasons given for tooth extractions in Hong Kong. *Community dental health*, 1991, 121:130.
9. Murray H, Clarke M, Locker D. Reasons for tooth extractions in dental practices in Ontario. *International dental journal*, 1997, 47:3-8.