FACTORS CAUSING TOOTH EXTRACTION AMONG PATIENTS VISITING DHQ HOSPITALS DIR LOWER AND CHITRAL KPK PAKISTAN

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ABSTRACT

OBJECTIVES

This study aimed to assess the factors and diseases that can lead to tooth extraction in lower Dir and Chitral, Khyber Pakhtunkhwa, Pakistan.

METHODOLOGY

The cross-sectional study was conducted at DHQ Hospitals lower Dir and Chitral from March to August 2022. Patients were informed about the nature and objectives of the study, and consent was obtained before the procedure. The total number of participants was 400, and data was collected through a convenient sampling technique. Below 18 years and edentulous patients were excluded. The Institutional Review Board approved the study of the DHQ Hospital Lower Dir and Chitral. Data were analyzed by using SPSS version 22.0 software.

RESULTS

The male participants were 53.3 per cent, and the female was 46.7. Dental caries was the most common reason for tooth extraction (52.5 per cent), followed by own option of the patients for tooth extraction (46.0 percent), wisdom tooth extraction (22.8 per cent), extraction due to dental plaque (22.0 per cent) due to periodontal disease (21.8 per cent), and orthodontic purposes were (12.0 %).

CONCLUSION

Our findings show that dental carries are the most common cause of tooth extraction.

KEYWORDS: *Periodontitis, Dental Caries, Dental Plaque, Cigarette Smokers*

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INTRODUCTION

Extraction means to have a tooth removed from the mouth or oral cavity, usually because of some disease like deep dental carries, trauma or crowding. The main reason for tooth extraction is dental caries 63.1%, periodontitis 26.2%, restoration failure 4.6%, trauma 3.2%, local pathologies 2.9%, and more than half of the patients 52.6 had poor oral hygiene.[1,2] According to a study, a total of 917 permanent teeth were removed from 613 patients in Scotland, where the cause of extraction is described as tooth decay is 51 per cent, gum disease at 21 per cent, malocclusion is 11 per cent, and defeat of root canal therapy is 4 per cent. Swelling and infection of gum tissue around the wisdom tooth and more causes consider for 55 per cent of extractions. The patient is chosen removal of the tooth over the therapy at their desire. The ratio of extraction linked to periodontal Reasons for teeth extraction in the population of grossly carious teeth was 51.8%, the periodontal problem was 19.2%, and impaction is 2.9% disease rises from age 31-60 but then declines.[3] During the three-month trial periods, 123 individuals ranging in age from 9 to

62 years had a total of 184 permanent teeth removed. Males made up 54.5 per cent of the population, whiles females made up 45.5 per cent.[4] Overall, results showed that caries was the most frequent reason for tooth extraction at 35.3 per cent, surgical indications 4.9percent, patients request was 0.5percent, and 59.2 percent periodontal disease Caries was the main reason for tooth loss up to 50 years of age. However, periodontal disease is the main reason for 51 years old and over.[5,6] In the Brazilian population, the main reason for tooth extraction is dental caries 70.3% and 1 per cent because of gum disease, and cause of pre-prosthetic 6.4 per cent, 3.4 per cent third molar, 2.5 % for the cause of orthodontic treatment and 1 per cent patients requesting traumatic reasons.[7,8]

METHODOLOGY

The cross-sectional observational study was conducted from March to August 2022 at the region of KPK Pakistan, DHQ Hospitals lower Dir and Chitral. The Institutional Review Board approved the study of the hospital. Patients were informed about the nature and objectives of the study, and consent was obtained before the procedure. For extraction, patients were referred to the department for various reasons. Examples include dental caries and its consequences, periodontal disease, orthodontic issues, failed restorations, and impacted wisdom teeth. Questionnaires were received, and 400 sample sizes following the previously published data collected were statistically analyzed to see any association between variables like patient's education level, age and sex, dental visit and extraction of permanent teeth. For data analysis, computer software SPSS 22 was used.

RESULTS

Four hundred samples were collected from those patients who came for teeth extraction. The age ranged from 18 to 61 years during the 4-5 months study period male were 53.3%, and females were 46.7 %. In our study, dental carries were the most common reason for tooth extraction (52.5 per cent), wisdom tooth extraction (22.8 per cent), extraction due to dental plaque (22.0 per cent) due to periodontal disease (21.8 per cent), and orthodontic purposes were (12.0%) own option of the patients for tooth extraction (46.0 per cent).

Table 1: Age-Wise Distribution of the Patient's Extraction.

Age	f	%age
18-30	198	49.5%
31-45	123	30.8%
46-61	79	19.7%
Total	400	100%

Table 2: Gender-Wise Distribution of the Patient's Extraction

Gender	f	%age
Male	213	53.3%
Female	187	46.7%
Total	400	100%

Table 3: Factors Causing Tooth Extraction

Factors	f	%age	Factors
Smoking	75	18.1	Smoking
Toothpaste	170	42.2	Toothpaste
Wisdom tooth extraction	91	22.8	Wisdom tooth extraction
The patient is asking for an extraction	184	46.0	The patient is asking for an extraction
Orthodontic problem	48	12.0	Orthodontic problem
Dental caries	210	52.5	Dental caries
Dental plaque	88	22.0	Dental plaque
Periodontal disease	87	21.8	Periodontal disease

DISCUSSION

In our study, dental carries were the most common reason for tooth extraction (52.5%), according to a study conducted by Yap AU in Indonesia reported that the main reason for tooth extraction was dental caries (63.1%). In contrast, Periodontal disease (26.2%), Restoration failure (4.6%), Traumas (3.2%), Local pathologies (2.9%), and more than half of the patients(52.6%) had poor oral hygiene.[9] Other studies reported similar findings.[10,11] In Islamabad, the reason and pattern of tooth extraction in tertiary care hospitals identified Dental caries (51.0%), wisdom tooth extraction (0.1%), dental plaque (2.0%), periodontal disease (19.0%), and orthodontics purposes 2.0%.[12] Another study conducted in Pakistan also reported similar findings.[13] The primary reasons for tooth extraction in the Egypt population were "Dental caries" 13.0%, periodontal disease 12.0%, and orthodontic purposes 6.9%.[14] Caries has been cited as the most common dental disease leading to tooth extraction in all the studies above, and results from the current study conform to the previous studies. Caries were the most prevalent condition leading to tooth extraction. Periodontitis was our study's second most common dental disease leading to tooth extraction. A considerable percentage of

patients (21.8%) presented with periodontitis and with the presence of caries. However, due to grade 2 mobility, periodontitis was considered the cause of extraction. Periodontitis was primarily diagnosed amongst patients in their fifth decade or later. Like many international studies, these findings reported periodontitis as the major cause of tooth extraction in the elderly aged 18 to 61. Amongst the extraction done for a periodontal reason, 17.8% of patients were younger than 50 years of age which shows a shear lack of oral health maintenance and awareness amongst our general masses.[15,16] The results obtained from the present study differ from an earlier study in which tooth extractions due to caries (52.5%) were far less than what we found in our study population, whereas wisdom tooth extraction (22.8%). However, periodontal disease was still reported to be the most common cause of tooth extraction (21.8%). Differences in culture, dietary habits and oral hygiene practices might have affected the disease burden.[17] Most parents seek treatment for their children only when they have pain. It is a tragic indicator of poor dental knowledge and attitude towards dental caries and its subsequent ramifications in children and their parents in our society, especially when it is related to a primary dentition, as another permanent one will replace them.[18] A misconception among parents and caretakers who assumed the first permanent molar to be a primary tooth may be another reason they do not seek treatment, even if this tooth is severely decayed. Studies from many developed countries have reported significant reductions in the rate of dental caries and the subsequent need for tooth extraction.[19] In Pakistan, Khyber Pakhtunkhwa, the Lower Dir and Chitral districts, we need to re-direct our health finances towards preventive strategies to reduce the disease burden.

LIMITATIONS

One limitation was that we did not find the frequencies of dental problems and facilities in the community. The nutritional factors were also not focused on in our study, which can be contributing factors. More comprehensive studies are required.

CONCLUSIONS

Our findings show that dental carries are the most common cause of tooth extraction among all other factors.

CONFLICT OF INTEREST: None

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