Original Research Article

Age and gender distribution of patients undergoing teeth extraction: a retrospective study in a tertiary health care centre

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ABSTRACT

Background: Tooth extraction remains a major commonly performed procedure in developing countries. Tooth loss affects mastication, speech, aesthetics and impairs the quality of life. The number of extracted teeth can serve as an indicator for socioeconomic status or oral hygiene level. It is essential to provide awareness regarding oral hygiene maintenance and early detection of dental problems to minimise extractions. The aim of the study was to investigate the age and gender distribution of patients undergoing extraction of teeth at GVPIHC and MT, Visakhapatnam, Andhra Pradesh.

Methods: In this retrospective study, case records of all patients who underwent dental extractions in the department of dentistry at Gayatri Vidya Parishad institute of health care and medical technology (GVPIHC and MT) from January 2021 to December 2021 were reviewed through random sampling. Inclusion criteria included dental extraction cases in the age group of 1year to 80 years. Incomplete data of extractions was excluded. Demographic details of patients like age and gender were recorded for 972 extraction cases that were included in the study. The data collected was entered in Microsoft excel, analysed through SPSS Software and was subjected to statistical analysis.

Results: Among 972 extractions, females showed predominance over males. 21-30 years age group reported more extractions and 71-80 years age group the least. On comparing the association between age and gender, the results were statistically significant (Pearson's chi square test, $p<0.05$). The age group of 11-20 years, 61-70 years and 71-80 years reported male predominance in contrast to the other age groups.

Conclusions: Within the limits of present study, it can be concluded that the prevalence of dental extraction was more in females than males. The age group of 21-30 years recorded more number of extractions. This study will help us to create awareness and emphasize the importance of oral hygiene maintenance among people to prevent tooth loss at an early age.

Keywords: Extraction, Age, Gender, Teeth

INTRODUCTION

Teeth play a vital role in mastication, phonetics and aesthetics. Tooth extraction remains a major commonly performed procedure in developing countries. The reasons for tooth extraction and the number of teeth extracted in a population have been linked to the oral hygiene, level of education, socioeconomic status, and individual quality of life.[1] Tooth extraction is one of the dental treatments which should be considered the last option. A decrease in the number of teeth may result in poor dietary habit and deterioration of quality of life. Extraction of permanent teeth is performed for several reasons including dental caries, periodontal disease, orthodontic reasons, impacted teeth, failed dental treatment, prosthetic indications and other reasons.

Maintaining healthy teeth is essential right from childhood for overall oral and general development.[2] Parents and family members are considered the primary source for knowledge about child rearing and health habits for children, which undoubtedly have a long-term influence in determining a child's oral health status. They are considered the key persons in achieving the best oral health outcomes and assuring well-being for children.[3] In adults such oral hygiene maintenance awareness is created through social media and oral health camps. The aim of this study was to investigate the age and gender distribution of patients undergoing extraction of teeth at GVPIHC and MT, Visakhapatnam, Andhra Pradesh.

METHODS

In this retrospective study, the dental records of patients attending the department of dentistry at Gayatri Vidya Parishad institute of health care and medical technology (GVPIHC and MT) from January 2021 to December 2021 were reviewed through random sampling method and evaluated by a single calibrated examiner. Inclusion criteria included dental extraction cases in the age group of 1 year to 80 years. Extraction cases in patients below 1 year and beyond 80 years were excluded. Incomplete data of extractions was also excluded. Cross verification of data for errors was done with the help of an external examiner. Records of 972 extracted patients were included in our study. The demographic data like age and gender were recorded. The obtained data was entered into Microsoft excel. The retrieved data was then analysed using statistical package for social sciences (SPSS) software and subjected to statistical analysis. The Pearson's chi-square test was used to test associations between categorical variables.

RESULTS

In our study, among 972 dental extraction patients 63% were females and 37% were males (Figure 1).
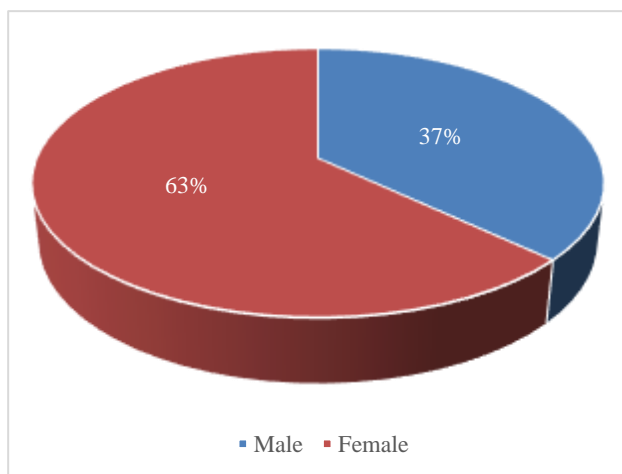

Figure 1: Gender distribution of patients undergoing extraction.

The majority of the patients belonged to the age group of 21-30 years followed by 61-70 years. Least number of patients were noticed in the age group of 71-80 years (Figure 2).
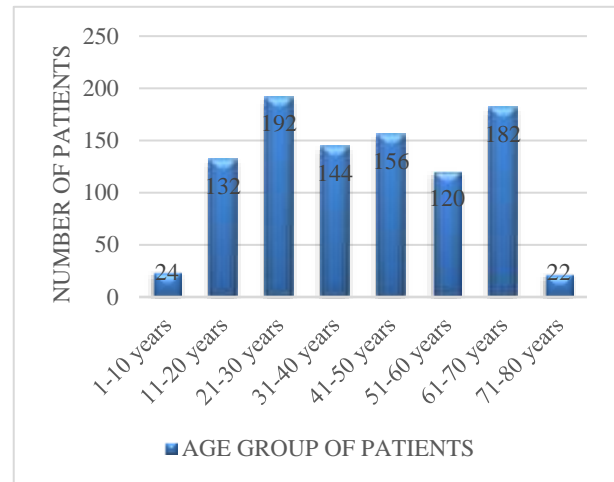

Figure 2: Age distribution of patients undergoing extraction.

Among patients who underwent extraction about 3.3% of males and 1.9% of females belonged to the age group 1-10 years, 20% of males and 9.8% of females in the age group 11-20 years, 12.7% of males and 23.8 females in the age group of 21-30 years, 6.6% of males and 19.6% of females in the age group of 31-40 years, 7.2% of males and 21.2% of females in the age group of 41-50 years, 13.3% of males and 11.7% of females in the age group of 51-60 years, 33.33% of males and 10.1% of females in the age group of 61-70 years, 3.3% of males and 1.6% of females in the age group of 71-80 years (Figure 3). The association between age and gender was analysed through Pearson's Chi-square test and was found to be statistically significant, $p < 0.05$.
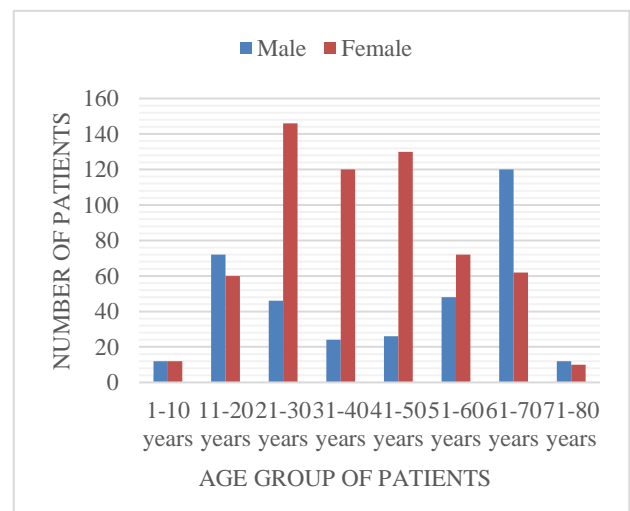

Figure 3: Age and gender association in patients undergoing extraction.

DISCUSSION

A large number of cross-sectional studies have been investigated for tooth loss in different countries. Our study was based on the patients seeking dental treatment at GVPIHC and MT, Visakhapatnam from January 2021 to December 2021. A total of 972 patients underwent dental extraction during this period. Gender distribution in our study showed female predilection (63%) which was in contrast to the study by Pratha et al that showed male dominance of 53.98%.[4] Byahatti et al in Libyan population, showed higher prevalence in males (61.13%) compared to females (46.17%) which was also not in accordance with our study.[5] Kumar et al and Desar et al studies showed female predominance of 52.5% and 60% respectively similar to our study results.[6,7]

In our study the majority of the patients undergoing extractions belonged to the age group of 21-30 years which was in accordance with Farah Naz study who showed that the age group less than 30 years had undergone more dental extraction compared to other age groups.[8] Hamagharib et al showed that more number of dental extractions were done in the age group of 41-50 years which was in contrast to our study.[9] According to Tassoker et al the more prevalent age group to undergo dental extraction was 31-40 years which was also contradictory to our study.[10] Christabel et al showed age as the best predictor of extraction of teeth like our study.[11] This is in contrast to the studies by Anjana et al whose results showed no association of age with dental extractions.[12]

Limitation of this study was the lower sample size and the data that was confined only to the patients visiting our hospital. Thus, the results could not be generalized to the entire population.

CONCLUSION

Within the confines of present study, it can be concluded that the prevalence of dental extraction was more in females than males. Number of dental extractions were more in the age group of 21-30 years with female predilection and least in the age group of 71-80 years with male predilection. This study will help us to create awareness and emphasize the importance of oral hygiene maintenance among people to prevent tooth loss at an early age.

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