Original Article

Knowledge of Tooth Wear in Patients of A Tertiary Care Hospital in Lahore

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ABSTRACT

Objective: To determine the status of knowledge of tooth wear in patients of a Tertiary Care Hospital in Lahore, so that need to suggest educational and informational programs about the prevention of tooth wear can be assessed.
Study Design: Descriptive, cross-sectional study
Place and Duration of Study: This study was conducted at the Dental OPD department of Prosthodontics, Punjab Dental Hospital, Lahore, from June 2019 to December 2019 for a period of six months.
Materials and Methods: A total of 402 patients presented to Dental OPD department of Prosthodontics, Punjab Dental Hospital, Lahore. Predesigned interviewer administered questionnaire was adopted and the levels of knowledge are categorized as high, moderate and low.
Results: In this study, 206 (51.24%) adults had low level of knowledge, 123 (30.60%) had moderate, while 73 (18.16%) adults had high level of knowledge with frequency of awareness of tooth wear was seen in 196 (48.76%) patients.
Conclusion: Frequency of moderate to high level of knowledge regarding occurrence of tooth wear in patients was low.
Key Words: knowledge, tooth wear, moderate

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INTRODUCTION

Tooth wear (TW) is an irreversible, non-carious dental problem that leads to the loss of dental hard tissue.[1,2] Patient perception regarding tooth wear includes poor aesthetics, a shortened clinical crown, tooth sensitivity and physiological and psychological discomfort. Clinical presentation and etiology are usually subdivided into the previously mentioned terms of Attrition, Erosion, Abrasion and Abfraction. Diagnosis is often based on the clinical findings, which may suggest one causative factor.[3,4]

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However, it is well known that the cause of tooth wear is multifactorial, making clinical diagnosis difficult. Thus, it is suggested that these single terms, which can be useful when considering and describing the etiology, may only describe the outcome of a number of underlying events rather than the cause or process involved in the wear.[5,6]

Occasionally, patients may have inherited dental conditions that may increase the severity of tooth wear, such as Amelogenesis Imperfecta, Dentinogenesis Imperfecta and Dentine Dysplasia, to name a few. It is important to inform these patients of their increased risk of wear.[1,3,4] Most common causative factors are acid reflux, intake of acidic food items, bulimia nervosa, forceful brushing, use of electric toothbrushes, abrasive toothpastes, tensile and compressive stresses at cervical margin of tooth and bruxism etc.[7,8] Epidemiological studies have indicated that the prevalence of tooth wear is increasing in the ageing population and was calculated as 38.6% in Pakistani adults.[5]

Tooth wear is a slow progressing disease that can be prevented during its pathogenesis by avoiding its risk factors. Previous studies about knowledge assessment of tooth wear have been conducted in Malaysia and Norway.[9,10] In Pakistan, data about the patient's knowledge level of tooth wear, are scarce. The purpose of this study is to investigate the status of knowledge regarding tooth wear in patients presenting to a Tertiary Care Hospital Lahore, Pakistan. Punjab Dental Hospital is a large Tertiary Referral Center in Punjab providing

dental services to a large number of patients of the province. It will provide statistical data at provincial level and enable us to suggest educational and informational programs about the prevention of tooth wear.

MATERIALS AND METHODS

This study was conducted in department of Prosthodontics, de 'Montmorency College of Dentistry/ Punjab Dental Hospital, Lahore. Patients attending Out Patient Department in the age ranges 18-40 years were included in the study. Patients with severe psychiatric morbidities or developmental anomalies as per their compromised mental health, assessed through their medical history, were excluded from this study. Informed consent was taken from each participant of this study.

A predesigned interviewer administered questionnaire was adopted as standardized measuring tool for uniform series of data collection. This questionnaire contains 10 items for the knowledge about tooth wear. Each item is given the score 2. Variables include levels of knowledge of tooth wear i.e. High, Moderate and Low. Low level ranges from 0-12, Moderate level ranges from 14-16 and High-level ranges from 18-20.

Statistical Analysis: Statistical analysis was performed using Statistical Package for the Social Sciences (SPSS) version 23.Post-stratification Chi-square test was applied by taking p-value ≤0.05 as significant.

RESULTS

Age range in this study was from 18 to 40 years with mean age of 30.12 ± 4.50 years. Majority of the patients 213 (52.99%) were between 31 to 40 years of age as shown in Table I.

Table No.1: Age distribution of patients (n=402)

Age (in years)	No. of Patients	%age
18-30	189	47.01
31-40	213	52.99
Total	402	100.0

Mean ± SD = 30.12 ± 4.50 years

Out of the 402 patients, 181 (45.02%) were male and 221 (54.98%) were females with male to female ratio of 1:1.2. Distribution of patients according to education is shown in Table 2.

Table No.2: Distribution of patients according to education (n=402)

Education	Frequency	%age
Uneducated	193	48.01
Educated	209	51.99
Total	402	100.0

In my study, 206 (51.24%) adults had low level of knowledge, 123 (30.60%) had moderate, while 73 (18.16%) adults had high level of knowledge with frequency of aware of tooth wear was seen in 196 (48.76%) patients as shown in Figure I.

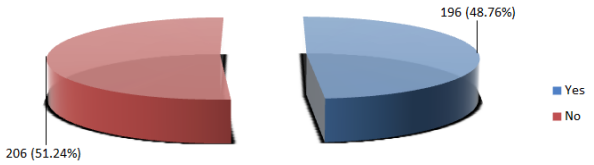

Figure No.1: Frequency of aware of tooth wear (n=402)

When stratification of awareness of tooth wear was done on age groups, it was found that there was no significant difference between different age groups as shown in Table 3 while the stratification of awareness of tooth wear with respect to gender has shown in Table 4 which also showed no significant difference between male and female. Table 5 has shown the stratification of awareness of tooth wear with respect to education.

Table No.3: Stratification of awareness of tooth wear with respect to age

Age (years)	Awareness of tooth wear		p-value
	Yes	No	
18-30	89	100	0.529
31-40	107	106	

Table No.4: Stratification of awareness of tooth wear with respect to gender

Gender	Awareness of tooth wear		p-value
	Yes	No	
Male	80	101	0.098
Female	116	105	

Table No.5: Stratification of awareness of tooth wear with respect to education

Education	Awareness of tooth wear		p-value
	Yes	No	
Uneducated	128	81	0.0001
Educated	68	125	

DISCUSSION

Tooth wear is a multifactorial condition that leads to the irreversible, non-carious loss of hard dental tissues (dental enamel, dentine and cementum) and results in functional and aesthetic oral limitations.[11,12] The literature divides tooth wear into mechanical wear (attrition and abrasion) and chemical wear (erosion). Both in vitro and in vivo studies demonstrate that these mechanisms are rarely found individually.[13]

Dental information is available through many informational and educational channels through family and friends, from dental care professionals during dental appointments, school or from the Internet and apps. However, patients' preferences for different information channels are not well known. Knowledge regarding tooth wear is essential for oral health and is

compulsory to modify health related practice. A deficient knowledge might influence the quality of life of individuals which ultimately affect the morbidity and mortality of a tooth.[14] In addition attitude and practice towards tooth wear are correlated to inflict awareness to prevent tooth wear mechanisms from becoming pathological and thus reducing its prevalence. Therefore, knowledge and awareness of the community is important to overcome the occurrence of this lesion.[14,15]

This study is conducted to determine the frequency of levels of knowledge regarding occurrence of tooth wear in patients. Age range in this study was from 18 to 40 years with mean age of 30.12 ± 4.50 years. Majority of the patients 213 (52.99%) were between 31 to 40 years of age. Out of the 402 patients, 181 (45.02%) were male and 221 (54.98%) were females with male to female ratio of 1:1.2.In my study, 206 (51.24%) adults had low level of knowledge, 123 (30.60%) had moderate, while 73 (18.16%) adults had high level of knowledge with frequency of aware of tooth wear was seen in 196 (48.76%) patients. In young European adults, the prevalence of tooth wear was high i.e. 54.4%.[5] When awareness of tooth wear is assessed among general population in previous studies, 64.5% subjects had low mean score knowledge and only 35.5% subjects were aware of tooth wear in Kota Bharu Kelantan.[16] In Bertam, Penang, 58.2% adults had low level of knowledge, 38.4% had moderate, while 3.4% adults had high level of knowledge.[10] In Oslo Norway, among 18-year old adults, 56% were aware of tooth wear and only 47% were unaware of this condition.[11]

Research from Norway showed a greater awareness of erosive tooth wear: 88%-94% had heard about erosive tooth wear.[14]There were little knowledge about erosive tooth wear: current guidelines about having no more than seven food/drink consumptions daily (except for drinking water, coffee and tea without milk or sugar) were known to 9% only.[17]

The scientific literature elaborates that studies have their main focus on the causative factors, prevalence, and treatment options for dental erosive lesions. However, a survey among general dental practitioners from 2003 showed that there is a small proportion of dentists who advised their patients about the erosive wear. Recent studies showed that an insufficient information about dental erosive wear was given by dental practitioners to adolescents/adults in possible risk groups.[18] Furthermore; another recent study determined the knowledge and awareness about dental erosion among dental students, faculty members and patients in a Brazilian dental school were poor.[19,20].

CONCLUSION

This study concluded that frequency of moderate to high level of knowledge regarding occurrence of tooth wear in patients is low. So, we recommend that public awareness programs should be arranged to educate the population regarding the prevention of tooth wear.

Author's Contribution:

Concept & Design of Study:	Sabiha Naeem
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Data Analysis:	Muhammad Sohaib Nawaz, Momina Akram, Hafiz Nasir Mahmood
Revisiting Critically:	Sabiha Naeem, Hamna Khawaja
Final Approval of version:	Sabiha Naeem

Conflict of Interest: The study has no conflict of interest to declare by any author.

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