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Research Article

**ASSESSMENT OF KNOWLEDGE AND PRACTICES ABOUT
DENTURE HYGIENE AMONG COMPLETE DENTURE
WEARERS**Dr Amber Abbas¹, Dr Syeda Asma Saad¹, Dr Nimra¹¹Bhitai Dental & Medical College, Mirpur Khas

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Abstract:

Introduction: In man, health and disease are not static conditions but exist on a continuum and on this continuum; exists arbitrary points or boundaries to delineate specific diseases. **Objectives:** The main objective of the study is to analyse the knowledge and practices about denture hygiene among complete denture wearers. **Material and methods:** This cross sectional study was conducted in Bhitai Dental & Medical College, Mirpur Khas during June 2019 to March 2020. The data was collected through questionnaire. This questionnaire was designed to gather the socio demographic characteristics, assess the denture hygiene knowledge, attitudes, and practice advice. This 23-item questionnaire included five knowledge related questions (plaque on denture bases, denture cleansing aids, etc.), each of these questions had three options to choose from: Yes, no and do not know. **Results:** The majority of the dentists' were females 90 (54%) and the greater part of the study population were DPs qualified with just a bachelor degree 142 (85%). As presented in this table, when the subjects were questioned if oral biofilms on complete denture are associated with conditions like denture stomatitis and other serious systemic diseases, 25 (18%) of the DPs responded wrongly. Similarly, neither the DPs nor the specialists in this study could come to a common consensus to use or not to use regular toothpaste for denture cleansing. Thirty-two percentages of the DPs cited that cleaning the tissue bearing side of the denture affects its retention in the mouth. **Conclusion:** It is concluded that within the limitations of this study, most of the denture wearers had little knowledge of denture cleaning and hygiene practices. This study had revealed that oral hygiene habits and practices may not always be correlated positively with age, gender, method of prosthesis care and number of years of usage of prosthesis.

Corresponding author:**Dr Amber Abbas,**

Bhitai Dental & Medical College, Mirpur Khas

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INTRODUCTION:

In man, health and disease are not static conditions but exist on a continuum and on this continuum; exists arbitrary points or boundaries to delineate specific diseases. These boundaries are frequently for the convenience or to rapidly describe in a word where along health – disease continuum the individual or condition exists. Such may be the situation in the putative progression from health to periodontitis to exfoliation of the tooth [1].

If periodontal health is to be maintained, daily effective oral hygiene measures should be pursued, failing to do so will unleash the inevitable consequences of plaque accumulation. Dental plaque accumulates of all surfaces; both hard and soft in the oral cavity. Removable dentures are also vulnerable to plaque accumulation hence; oral hygiene maintenance is a life-long exercise [2].

Oral hygiene has ancient roots; the first reference toward maintenance of oral hygiene by people was in the form of “chewing sticks.” As early as 3500 BC, the Babylonians used chewing sticks taken from special aromatic trees designed to clean the teeth and freshen breath.^[3] Most common device used to achieve oral hygiene in the present day is the “toothbrush.” Mechanical tooth cleaning by means of a toothbrush is considered the most common ways of disturbing dental plaque development. Changing demographics, show increase in life expectancy and the growing numbers of elderly [3].

Growth in this aging population has resulted in a corresponding increase in the number of elderly requiring dentures. Complete dentures constitute one of the most important treatment options in prosthodontics [4]. Newly made dentures could be a disappointment to a patient if he is deficient in maintaining proper denture hygiene. Denture cleanliness is essential to prevent malodor, poor aesthetics and the accumulation of plaque/calculus with its deleterious effects on the mucosa. The micro-porous surfaces of an acrylic denture provide a wide range of environments to support microorganisms that can threaten the health of physically vulnerable denture patients. There are innumerable solutions, pastes and powders available for cleaning dentures with a variety of claims about their relative efficacies [5].

Objectives

The main objective of the study is to analyse the knowledge and practices about denture hygiene among complete denture wearers.

MATERIAL AND METHODS:

This cross-sectional study was conducted in Bhitai Dental & Medical College, Mirpur Khas during June 2019 to March 2020. The data was collected through questionnaire. This questionnaire was designed to gather the sociodemographic characteristics, assess the denture hygiene knowledge, attitudes, and practice advice. This 23-item questionnaire included five knowledge related questions (plaque on denture bases, denture cleansing aids, etc.), each of these questions had three options to choose from: Yes, no and do not know. Five attitude statements were included (use, perceived necessity, patient education). The options for attitude were based on 5-point Likert scale, it requires the dentists' to make a decision on their level of agreement on this scale (strongly agree, agree, do not know, disagree, strongly disagree). Finally the practice advice questions (clinical practice, patient instructions on use, patient recall and evaluation). Nine experts in the field were invited to review this questionnaire for its face and content validity. The experts were requested to identify the deficient areas and provide recommendations and suggestions on ways to improve the clarity of the questions. The cumulative average of the level of agreement among the experts was 82% or 0.82 which denotes a high level of agreement.

The data was collected and analysed using SPSS version 17. All the values were expressed in mean and standard deviation.

RESULTS:

The majority of the dentists' were females 90 (54%) and the greater part of the study population were DPs qualified with just a bachelor degree 142 (85%). As presented in this table, when the subjects were questioned if oral biofilms on complete denture are associated with conditions like denture stomatitis and other serious systemic diseases, 25 (18%) of the DPs responded wrongly. Similarly, neither the DPs nor the specialists in this study could come to a common consensus to use or not to use regular toothpaste for denture cleansing. Thirty-two percentages of the DPs cited that cleaning the tissue bearing side of the denture affects its retention in the mouth.

Table 01: Dentists knowledge associated with denture hygiene maintenance

Questions	N (%)		P value
	Dental practitioners N= 142	Specialist's N=26	
Do dentures accumulate plaque/biofilms?			
Yes	126 (89)	26 (100)	0.198 NS
No	4 (3)	0 (0)	
Don't know	12 (8)	0 (0)	
Are oral biofilms on complete denture associated with conditions like denture stomatitis and other serious systemic diseases?			
Yes	95 (67)	26 (100)	0.003* S
No	25 (18)	0 (0)	
Don't know	22 (15)	0 (0)	
Is regular toothpaste advisable for denture cleansing?			
Yes	95 (67)	11 (42)	0.057 NS
No	41 (29)	13 (50)	
Don't know	6 (4)	2 (8)	
Does cleaning the tissue bearing side of the denture affect its retention in the mouth?			
Yes	46 (32)	4 (15)	0.009* S
No	63 (44)	20 (77)	
Don't know	33 (23)	2 (8)	
Does placement of denture in hypochlorite cleansing solution for a longer period damage the dentures?			
Yes	61 (43)	16 (62)	0.202 NS
No	30 (21)	3 (12)	
Don't know	51 (36)	7 (27)	

NS: Not Significant, S: significant, *: χ^2 test comparing between DPs and specialists

Table 2: Dentists attitudes towards denture hygiene instruction delivery to their patients

Questions	N (%) of respondents N= 168		
	Strongly agree/ agree	Don't know	Strongly disagree/ disagree
Explaining denture hygiene instructions to old patients can be very time consuming			
Dental practitioners	69 (48)	4 (4)	69 (48)
Specialist's	8 (31)	0 (0)	18 (69)
It is of no use to provide older people with denture hygiene instructions, as they decline to follow			
Dental practitioners	38 (27)	7 (5)	97 (68)
Specialist's	1 (4)	0 (0)	25 (96)
A recall program for complete denture patients is of no importance as denture teeth experience neither caries nor periodontal problems			
Dental practitioners	37 (27)	3 (9)	89 (65)
Specialist's	3 (12)	0 (0)	23 (89)
Patient education regarding the impact of denture hygiene on systemic health is not important			
Dental practitioners	14 (9)	9 (6)	119 (83)
Specialist's	1 (4)	2 (8)	23 (88)
Denture adhesives (if used) need not be cleaned completely and reapplied again daily			
Dental practitioners	25 (18)	6 (4)	111 (79)
Specialist's	3 (12)	4 (15)	19 (73)

DISCUSSION:

Dentists' knowledge was assessed in the present study wherein, when the DPs were questioned whether oral biofilms on complete denture was associated with conditions like denture stomatitis and other systemic disease; 25 (18%) replied "no" and 22 (15%) replied "don't know." It is absolutely essential to ensure that the dentists themselves are adequately educated and knowledgeable and essential that they apply this knowledge to train and instruct their patients about the importance of denture hygiene maintenance and also to recall them at regular intervals to ensure that the hygiene is maintained. Oral biofilms and its impact on dentures and also various systemic diseases associated with denture stomatitis have to be given appropriate emphasis in the curriculum [6,7].

It has also been observed that the majority of denture wearers do not pay necessary attention toward the cleanliness and hygiene of their dentures. This may be due to the denture wearers negligence as well as dentists' who give insufficient instructions to their patients about denture cleansing methods. The DPs also show a negative attitude to disseminate proper instructions to their patients. To educate and instruct, the denture wearers on proper denture hygiene is a moral and ethical responsibility of the dentist [8].

Maximum number of subjects 136 (96%) in this study instructed their patients regarding denture cleansing methods at the time of denture delivery. These very same subjects, 69 (48%) of the DPs and 8 (31%) of the specialists; strongly agreed that explaining denture hygiene instructions to the elderly can be very time-consuming. Similarly, this notion that, it is of no use to provide the elderly with denture hygiene maintenance instructions as, they decline to follow was recorded in 38 (27%) of the DPs [9]. In a comparable study conducted in Sao Paulo, Brazil [29] it was discovered that 51.89% of the practitioners did not give any instructions to their patients about denture cleansing after delivery of dentures. Another survey [30] performed on denture wearers showed that 82.9% of the patients stated they had never been instructed by their dentists'. The explanation of this immoral result might be explained as negligence on the part of the dentist himself or the reluctance of DPs to give correct answers and their attempts to give the expected answers during the survey. This is one of the major drawbacks of a questionnaire survey [10].

CONCLUSION:

It is concluded that within the limitations of this study, most of the denture wearers had little knowledge of denture cleaning and hygiene practices. This study had revealed that oral hygiene habits and practices may not always be correlated positively with age, gender, method of prosthesis

care and number of years of usage of prosthesis. By maintaining excellent denture hygiene, complete denture wearers can get maximum benefit out of their prosthesis for a longer period of time.

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