Research Article

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Dentist's Perception About Post Insertion Complaints Encountered by Complete Denture Patients in Erode District

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ABSTRACT

Background: The purpose of the study was to assess the knowledge of dental practitioners pertaining to the influence of factors such as retention, aesthetics, mastication, speech and post insertion comfort of patients wearing complete denture

Materials and methods: A cross sectional questionnaire survey was done among sixty dental practitioner. Eligible participants were administered with structured questionnaires (35questions). Post-insertion complaints, as reported by the dentist were recorded. The collected data was statistically analyzed using SPSS version 16. Chi square test was used to assess the difference between the Prosthodontist and general practitioner

Result: The data shows statistically significant difference between the general practitioner and the Prosthodontist in using impression technique and type of impression materials used. Significant difference was found between the gender about the complaints and satisfactory factors.

Conclusion: In most of this study, insufficient retention, ulcerations, speech difficulties caused most patient dissatisfaction as reported by the dentist. Prosthodontist were ahead of general practitioner with respect to newer techniques, implies the needed academic / professional training towards the same in other speciality and general practitioner.

Keywords: Complete denture, dentist, erode.

INTRODUCTION

The elderly population is remarkably increasing world-wide. The fast growing segment of population are in increased need of special care and attention to maintain a reasonable quality of life in the face of disability and growing frailty in this group. This might result in an increased demand for health and social services over the next quarter century. Tooth loss has a direct influence on reduced masticatory function and a shift towards a poorly balanced diet. This in turn will result in an increase in oral diseases due to a deficiency in various micronutrients, leading to a uncompromised immune status. This may make patients more susceptible to various infections and even malignancies. Ill-fitting dentures will worsen this situation and patients may avoid certain social activities like speaking, smiling, eating etc. in the presence of other person.

A dental prosthesis is defined as an artificial replacement (prosthesis) of one or more teeth (up to the entire dentition in either arch) and associated

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dental/alveolar structures. Dental prostheses are categorized as fixed dental prostheses or removable dental prostheses. (Glossary of prosthodontics term GPT-8)

Complete denture is defined as removable dental prosthesis that replaces the entire dentition and associated structures of the maxillae or mandible.(GPT 8) It is indicated in edentulous patients to restore the appearance and to assist in maintaining masticatory efficiency. Dentures are prosthetic devices fabricated to replace missing teeth, and they are supported by soft and hard tissues of the oral cavity.

Dentures can help patients in a number of ways: Mastication or chewing ability is improved by replacing edentulous areas with denture teeth; Improving the aesthetics of the individual as the presence of teeth provide a natural facial appearance. Wearing a denture to replace missing teeth provides support for the lips and cheeks and corrects the collapsed appearance that occurs after losing teeth further improving the aesthetics Phonetics is also improved by replacing missing teeth . These functions improves the patients' self esteem as they feel better about themselves.

The fabrication of a set of complete dentures is a challenge for experienced dentist too. There are many procedures and one has to make sure they do not miss any since any omission can lead to failure of the denture case. In the vast majority of cases, complete dentures should be comfortable soon after insertion, although almost always at least two adjustment visits will be necessary to remove sore spots. One of the most critical aspects of dentures is that the impression of the denture must be perfectly made and used with perfect technique to make a model of the patient's edentulous (toothless) gums. The dentist must use a proper impression techniques and materials to fabricate a complete denture so that would cause less post insertion complaints. It takes considerable patience and experience to make a denture that is satisfactory to both the patient and the dentist.

Therefore the aim of this study was to assess the knowledge of dental practitioners pertaining to the influence of factors such as retention, aesthetics, mastication, speech and post insertion comfort of patients wearing complete denture using a questionnaire

MATERIALS AND METHODS

A cross sectional questionnaire study was done among dentist practicing in Erode district. In this study sixty dentists, were selected randomly using convenience sampling . General dental practitioners (GDPs) were randomly sampled after stratification according to their qualification as undergraduates and postgraduates.

Questionnaires were distributed personally by the investigator and filled in questionnaires were collected after two days. Eligible participants were administered with structured questionnaires (35questions) which includes age, gender, level of education and retention, aesthetics, mastication, speech, post insertion comfort of patients wearing complete denture was assessed.

Statistical analysis:

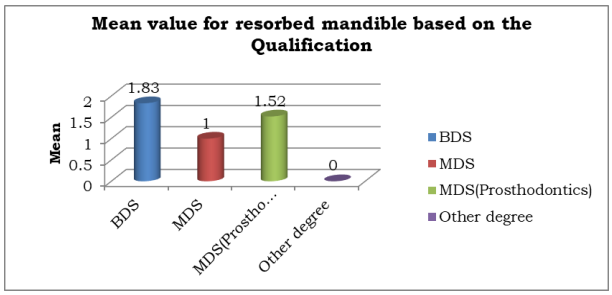
The data was analysed SPSS version 16.0 for descriptive statistics. Chi square test was used to assess the difference between the Prosthodontist and general practitioner. P value less than 0.05 was considered significant

RESULTS

Data was analysed for descriptives using spss version 16.0. chi square test was used to analyse the difference among different groups based on their qualification. A total of 60 dentist from Erode District participated in this survey. Among the study participants 39% were Bachelor in Dental Surgery, 61% constituded Maters in Dentistry, among which 49.2% were Prosthodontist. (GRAPH 1)

Table 1: Showing Mean, SD and F- value of Which technique do you follow for resorbed mandible based on the Qualification.

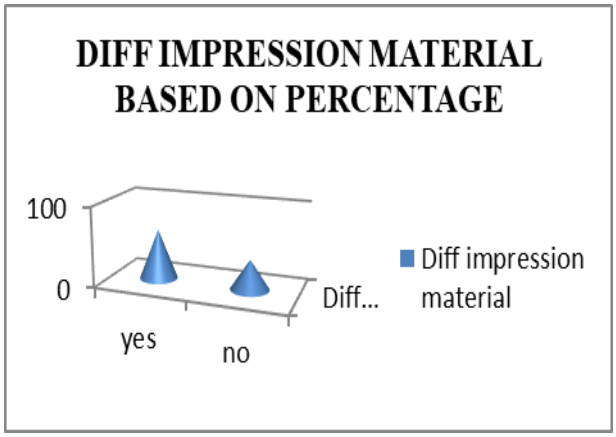
Qualification	N	Mean	Std. Deviation	F-Value	P-Value
BDS	23	1.83	.49	8.617	0.001 (S)
MDS	7	1.00	.00		
MDS(Prosthodontics)	29	1.52	.51		
Other degree	0	0	0		
Total	59	1.58	.53		



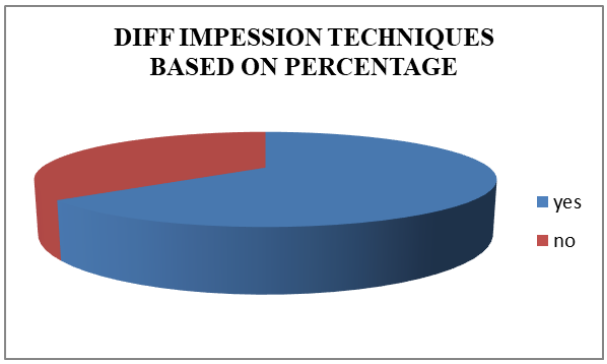
Graph 1: Mean value for resorbed mandible based on the Qualification

Among the professionals 67.8% were engaged in teaching profession. Among dentist working in college majority (86.4%) were engaged in private practice. Majority of the participants reported that zinc oxide eugenol (47.5%) was the impression material routinely used for making impression followed by alginate(40.7%) and light body material (11.9%)

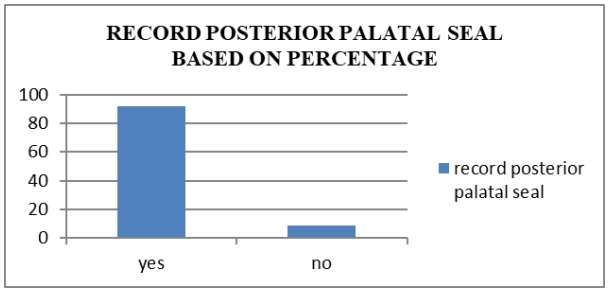
Pertaining to the impression method and material 64.4% a of the study participants reported using different impression method whereas 62.7% used different impression material to record the resorbed alveolar ridge. (Graph: 2, 3) About 55.9% dentist followed conventional technique to record the resorbed mandible and 44.1% used neutral zone technique. Majority of the dentist (91.5%) recorded the Posterior Palatal Seal out of which 62.7% used functional method and 30.5% used conventional method to record the PPS. Surprisingly 6.8% marked by the technician . (GRAPH: 4,5)In the present study half of the dentist applied pressure indicating paste to check the pressure spots.



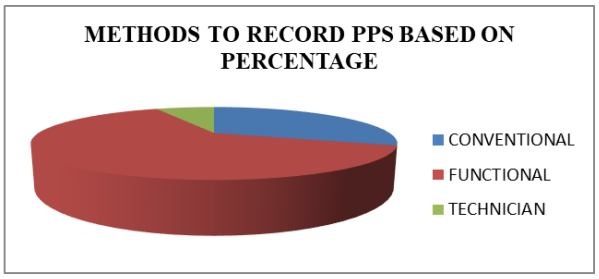
Graph 2: Diff impression material based on percentage.



Graph 3: Diff impession techniques based on percentage.



Graph 4: Record posterior palatal seal based on percentage.



Graph 5: Methods to record pps based on percentage.

Table 2: Showing Mean, SD and F- value of Which method do you use to record the PPS based on the Qualification.

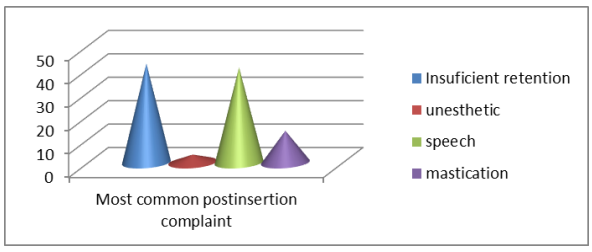
Qualification	N	Mean	Std. Deviation	F- Value	P- Value
BDS	23	1.91	.67	1.468	0.239 (NS)
MDS	7	1.57	.53		
MDS(Prosthodontics)	29	1.69	.47		
Other degree	0				
Total	59	1.76	.57		
Qualification	**N**	**Mean**	**Std. Deviation**	**F- Value**	**P- Value**

More than half of dentist routinely advised the patient for pre prosthetic surgeries. Most of the dentist recommended (86.4%) alveoloplasty. followed by frenectomy (11.9%) and vestibuloplasty (1.7%). In the ascending order teeth arrangement was done by technician (42.4%), Prosthodontist (32.2%) and by the dentist (25.4%). Majority of the participant (64.4%) were using three point articulator for teeth arrangement. About (18.6%) were using semiadjustable articulator. About (6.8%) were using hinge articulator. Regarding selection of teeth for the complete denture,88.1% selected acrylic teeth and 11.9% ceramic teeth respectively

Table 3: Showing Mean, SD and F- value of Which articulator do you routinely use or recommend for all cases based on the Qualification.

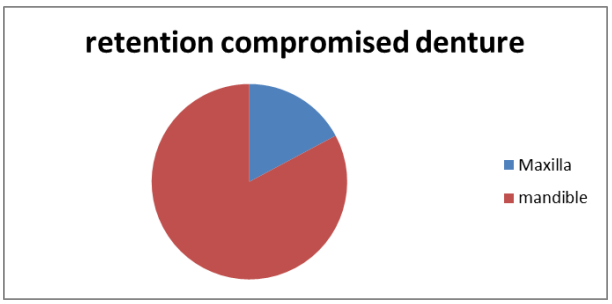
BDS	23	2.43	1.04	2.157	0.125 (NS)
MDS	7	2.71	.49		
MDS(Prosthodontics)	29	2.86	.44		
Other degree	0				
Total	59	2.68	.75		
Qualification	**N**	**Mean**	**Std. Deviation**	**F-Value**	**P-Value**

In the ascending order the most common post insertion complaint were insufficient retention(42.4%), speech difficulties(40.7%), mastication(13.6%), followed by unesthetic appearance(3.4%) . (GRAPH : 6)



Graph 6: Most common postinsertion complaint.

Pertaining to retention complaint, majority (81.4%) of them reported mandibular denture retention is a common problem. Difference in retention rate between medically compromised and normal patients were observed (62.7%). (GRAPH : 7)



Graph 7: Retention compromised denture.

When asked about the esthetic complaint (32.2%) reports fullness under the nose and too much or no tooth exposure was the most common complaint followed by artificial look , depressed philtrum , persistence of wrinkles and folds

Majority (71.2%) of the patients complaints of ulceration following the insertion of complete denture . The most common area of ulceration was buccal vestibule (55.9%) followed by distolingual vestibule (25.4%),residual alveolar musoca (10.2%), labial vestibule (8.5%). About (79.7%) reports atleast 1-2 time the patient visit on complaint of insertion. About (5.1%) reports 3-5 times patients visit on complaint of insertion. Majority of the dentist (55.9%) had done two times repair work in a year. 66.1% reports broken acrylic teeth was the most common repair work. About (33.9%) reports broken denture.

The most common reason for completely edentulous patients to have a denture is mastication (57.6%), esthetic (28.8%), speech (8.5%). Majority (52.5%) reports old denture wearers gets satisfied easily. About (47.5%) reports new denture wearers gets satisfied easily. Majority (76.3%) reports female gender often gets post insertion problems than male (23.7%). About (76.3%) reports male gender gets satisfied easily with the complete denture and (23.7%) says female gender gets satisfied easily with the complete denture

Majority (93.2%) says psychological factor of patient plays a role in satisfactory outcome of complete denture wearers. About (6.8%) says psychological factor does not play a role in satisfactory outcome of complete denture wearers. Majority (27.1%) reports esthetic is the most

common satisfactory factor of the patient, followed by retention (6.8%), mastication (5.1%), speech (5.1%). About (55.9%) reports all the above mentioned options.

Majority (94.9%) personally deliver the post insertion instructions to the patient. About (5.1%) doesnot deliver instructions personally. Majority (57.%) reports patients follows soft diet followed by semisoft diet (39%), hard diet (3.4%). About (67.8%) dentist are satisfactory in treating the complete denture patients. (!3.6%) are highly satisfied, (13.6%) neutral, (5.1%) are dissatisfied.

DISCUSSION

Complete denture is defined as removable dental prosthesis that replaces the entire dentition and associated structures of the maxillae or mandible.(GPT 8) It is indicated in edentulous patients to restore the appearance and to assist in maintaining mastiscatory efficiency

Many studies have been conducted to evaluate the post insertion discomfort among the patients. To our knowledge none of the study have been conducted in Indian scenario to assess the dentist perception about post insertion complaints. This made us to conduct a study to assess the dentist perception regarding the same.

This study was conducted to assess the knowledge and perception of dentist about post insertion complaints encountered by complete denture wearers. In the present study majority of the study participant were Prosthodontist followed by General Practitioner. Majority of the participants were engaged in private practice this may be due to limited employment in government sector.

Most of them were part time dentist with most of the dentist engaged in teaching profession this may be due to their academic zeal or unpredictable patient flow in clinic or may be due to financial benefits. In the present study majority used zinc oxide eugenol and alginate to make impression may be due to ease of method or may be due to economic factor.

It is interesting that majority of the study population used different impression material and technique for recording resorbed alveolar ridge.

In the present study insufficient retention was a major complaint similar study done earlier by **Irum Sikande** et al, **Hakan Bilhan et al .** Speech difficulties as reported in the study was 40% which was less than study done by Harvinder Singh et al[5] 64%. In this study ulceration complaint as reported by the dentist was 70% which was less than the study reported by , **Hakan Bilhan (47.5%), Harvinder singh (20%).** This may be due to oral condition was reported by the patients in other studies. So it is always better that the professional have review by themselves instead of asking patient

Retention in the mandibular denture was a challenge encountered by most of the dentist this may be due to the fact that dentist were not aware of the different impression technique and material based upon the condition of the patient.

Majority of the dentist recorded the Posterior palatal seal by functional method this may be the reason for the good retention of the upper denture.[3,5.]About (33.9%) reports broken denture which is high compared to study done by **Irum sikander (3.03%)** and **hakhan bilhan (20.3%)**[3] this may be due to teeth arrangement and fabrication of denture wasn't done by the Prosthodontist.[3]

In the present study female gender (76.3%) often gets the post insertion complaints which is similar to the study done by Hewa ahmed salih (63%). This due to female are more concerned about their esthetic than male.[6]

CONCLUSION

In most of this study, insufficient retention, ulcerations, speech difficulties caused most patient dissatisfaction as reported by the dentist. Prosthodontist were ahead of general practitioner with respect to newer techniques, implies the needed academic / professional training towards the same in other speciality and general practitioner.

CONFLICT OF INTEREST

No potential conflict of interest relevant to this article was reported.

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