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Original Research Article

CPD & its decreasing trend: A questionnaire survey among dentists in Maharashtra

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ABSTRACT

Aim: The trend of cast partial dentures (CPD) is decreasing day by day. The aim of this survey was to know the deceleration about use of CPDs.

Settings and Design: Descriptive survey.

Materials and Methods: This survey consist of eight questions regarding the use of CPDs by the dentists in Maharashtra which was sent to them through electronic communication.

Conclusion: The reason behind the downtrend of CPDs is advanced treatment options such as implants, fixed partial dentures. Also, high fabrication cost and aesthetics are other factors responsible for it.

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1. Introduction

Edentulousness is a condition in which tooth loss causes a negative aesthetic and biomechanical squeal. Although there has been a decrease in the number of complete denture patients, partially edentulous patients have increased in number, possibly due to global aging as well as oral health-related prevention policies.

Cast partial dentures (CPDs) produce improved results in terms of retention, stability, comfort, masticatory efficiency, and health of the periodontium of the abutment teeth.¹

The number and location of missing teeth have a large impact on how well the prosthesis restores and maintains functions similar to natural dentition.² Conventional treatment of complete dentures can sometimes result in poor retention, stability, and satisfaction of the patient. In such cases, the patient's confidence and comfort are jeopardized.³

This decline in the use of RPD is attributed to the availability of better treatment modalities such as implant-

supported prosthesis.⁴

The aims of this survey were 1) to know that how many dental practitioners still use CPD as one of the treatment modalities for missing teeth. 2) To determine why the CPD and its use has been declined in past years.

2. Materials and Methods

The online questionnaire survey containing eight questions was conducted & its was sent through mails, WhatsApp to the dentists in Maharashtra. The link was sent to 200 dentists in Maharashtra.

The online survey comprised of seven close ended questions. The aim of study was also stated at the beginning of survey. The communications were done through Emails or WhatsApp. Verbal response was strictly prohibited.

The first two questions Q1 and Q2 were related to most frequently encountered group of edentulism and suggested treatment modalities for partial edentulism. The next two questions Q3 and Q4 were related to how often patients agrees to CPD and the reason for rejection of CPD by patient. The next two questions Q5 and Q6 were related to

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know whether dental practitioner is aware of components and techniques of CPD and the number of RPDs delivered in one year. And the last was question was descriptive to know the opinion of dentist regarding decreasing trend of CPD.

Table 1: Questionnaire regarding use of CPD and its decreasing trend

Q.	Questions	Choice of responses
Q1	Frequently encountered group of edentulism	Kennedy's class I Kennedy's class II Kennedy's class III Kennedy's class IV
Q2	Suggested treatment modalities for rehabilitation of partially edentulous patient in clinical practice	Temporary partial denture Flexible denture Cast partial denture
Q3	If cast partial denture is the choice how often does the patient agrees to it	Very regular Quite often Rarely Very Rarely
Q4	Problem faced while suggesting Cast partial denture to the patient	Fabrication cost Lab support Prognosis Adjustments Aesthetics
Q5	Are you aware of technique and various components used in cast partial denture	Yes No Very rare
Q6	Removable partial denture delivered in a single year	Temporary partial denture 1-10 Flexible denture 10-20 Cast partial denture >20
Q7	What is your opinion about decreasing trend of CPD in India?	Descriptive question

3. Results

A total 200 dentists responded to this survey out of which 50 (25%) were prosthodontist and 150(75%) were general dentists. Out of 200 dentists 25(50%) prosthodontists and 85(56.6%) general dentists said that frequently encountered group of edentulism was Kennedy class I. 4 (8%) prosthodontists and 15 (10%) dentists said frequently encountered group was kennedy class II. 9 (18%) prosthodontists and 30 (20%) dentists said frequently encountered group was kennedy class III. 12 (24%) prosthodontists and 20 (13.3%) dentists said frequently encountered group was kennedy class IV. The difference was not statistically significant (p =0.871).Figure 1

Suggested treatment for missing teeth according to 29(58%) prosthodontist was CPD and 87(26%) general dentists opt for temporary RPD. 12 (24%) prosthodontists and 24 (16%) dentists opted for flexible RPD. The difference was statistically significant (p =0.009).Figure 2

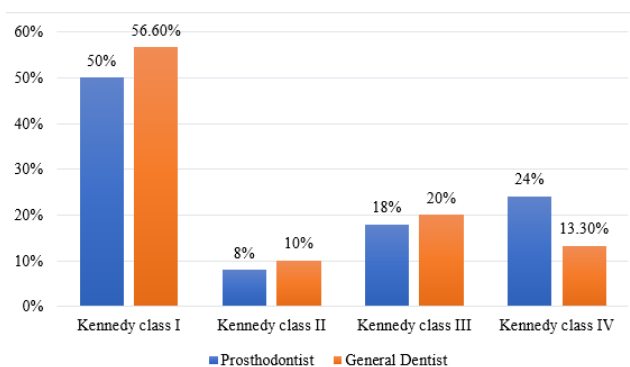


Fig. 1: Frequently edentulism type

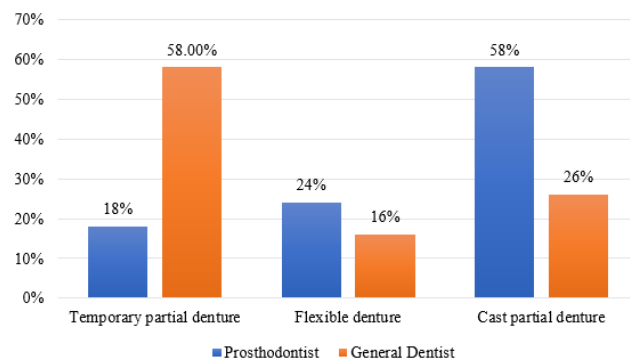


Fig. 2: Modalities for rehabilitation

According to 16 (41%) of dentists and 13 (44%) prosthodontists rarely patient agrees to CPD. According to 14 (35%) of dentists and 12 (41%) prosthodontists quite often patient agrees to CPD. There was no statistically significant difference. (p =0.093).Figure 3

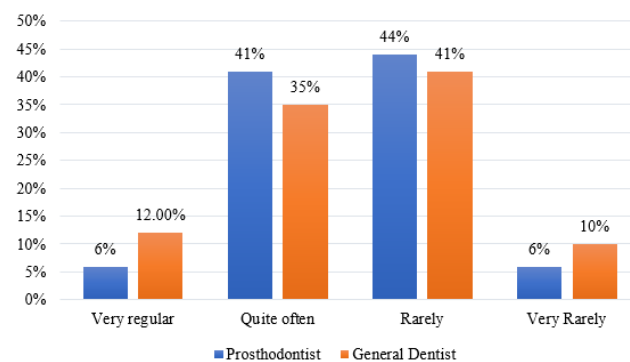


Fig. 3: Patient agrees to cast partial denture

48 (96%) prosthodontists and 42 (28%) dentists were aware of components and techniques of CPD. There was highly statistically significant difference (p < 0.001).Figure 4

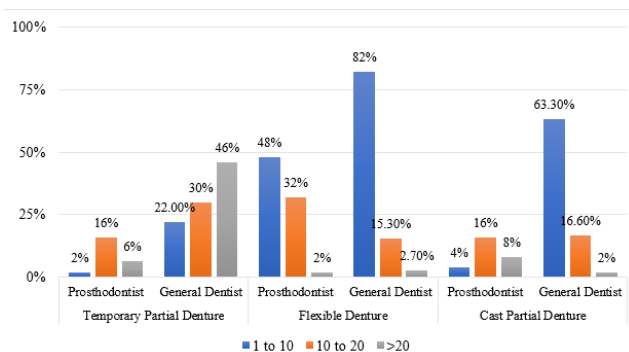


Fig. 6: No. of delivery /year

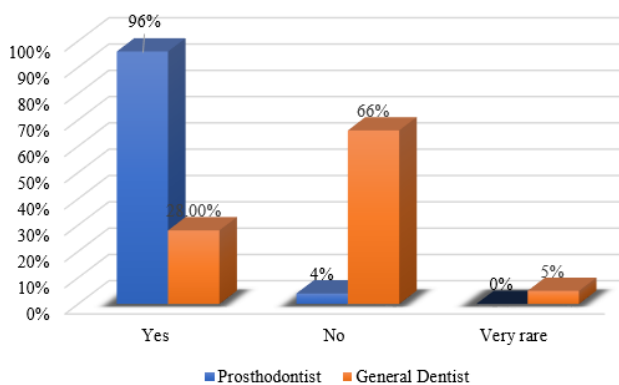


Fig. 4: Aware of techniques and components of CPD

When asked about Problem faced while suggesting Cast partial denture to the patient, 9 (31%) prosthodontists said it was due to aesthetics and 12 (30%) dentists said it was due to lab support. Figure 5

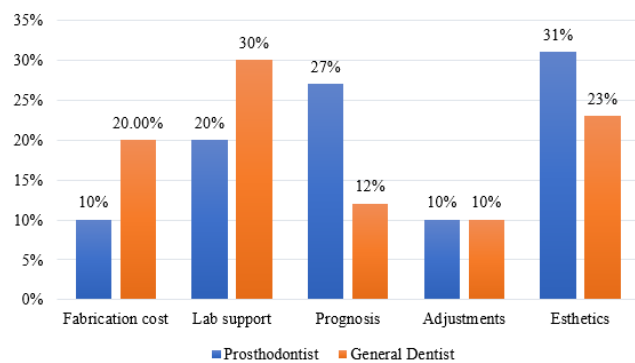


Fig. 5: Problems faced

When asked about Removable partial denture delivered in a single year 32 (64%) prosthodontists and 70 (46%) dentists said greater than 20 temporary RPDs are given in single year.

16 (32%) prosthodontists said 10-20 flexible dentures are given in a single year and 123 (82%) general dentists said

1-10 flexible denture are given. The difference was highly statistically significant difference ($p < 0.001$). 40 (8%) prosthodontists said greater than 20 CPDs are given and 95 (63.3%) dentists said 1-10 CPDs are given in a single year. The difference was highly statistically significant difference ($p < 0.001$). Figure 6

4. Discussion

The various treatment modalities for partially edentulous patients with missing varies from a provisional removable partial denture, a definitive cast partial denture, a resin bonded fixed prosthesis, fixed partial denture or an implant.⁵ Removable partial dentures (RPDs) are simplest and easiest method for replacing teeth for patients missing their natural teeth.⁶ Sometimes, RPDs serve to be the treatment of choice due to some anatomical, cost, and other patient related factors.⁵ A removable partial denture can be made of acrylic partial denture, CPD, or flexible denture.⁷

But due to advent of Implant supported fixed prosthesis and increasing demand for metal free prosthesis, the CPD trend is decreasing.

5. Conclusion

Change is the only constant thing in the world. World keeps changing with the changing trends. This survey shows that the primary and most often suggested treatment modalities for missing teeth by dentists is Removable partial denture or Cast partial denture still patients are not willing for it due to its high fabrication cost, aesthetics, high cost yet removable. The current and advanced treatment trends for partially edentulous patients with missing single or multiple teeth such as Fixed partial dentures and implants limits the use of CPD in clinical practice.

6. Conflict of Interest

There are no conflicts of interest in this article.

7. Source of Funding

None.

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