

Awareness of Precision Attachment in Fixed Partial Denture among dental students

Ajrish George¹, Dhanraj Ganapathy²

¹Undergraduate Student, Department of Prosthodontics, Saveetha Dental College, Saveetha Institute of Medical And Technical Sciences, Chennai-77

²Professor and Head, Department of Prosthodontics, Saveetha Dental College and Hospital, Saveetha Institute of Medical And Technical Sciences, No 162, Poonamalle High Road, Chennai -77, Tamil Nadu, India.

Abstract

Background

Precision attachment is one of the attachment, usually used in long-span fixed partial denture. It has historic value of advantage. It is the combination of cast-partial(removable partial denture) and fixed partial denture. It is usually used in areas of cantilever as precision attachment provide equal and balanced force distribution to the retainers. The precision attachment needs more sound practical and theoretical knowledge by the professional. So this is a technique sensitive procedure. This study involves accessing the awareness about the use of precision attachment in fixed partial denture among the dental students.

Aim: To access the awareness about precision attachment among dental students

Materials and Methods

206 students across different institutions in and around Chennai were accessed. Survey using an online live survey software was used in the survey. Series of questions were computed and shared among students across different dental institutions. The percentage of each category (first year, second year, third year, final year, intern, postgraduate students) of students was accessed separately.

Results

The results were obtained using the survey planet software. In the present study there were 206 participants. Of which 12% were 1 year, 22% were second year, 32% were third year, 23.3% were final year, 18.6% were postgraduates. 68% of the students were aware about use of precision attachments in fixed partial dentures.

Conclusion

The students were moderately aware of precision attachment use in Fixed partial dentures. In the era of developing implantology students should also know about the other prosthetic replacement. This will enable the students to do a perfect treatment plan.

Keywords: awareness, precision attachment, dental students

1. Introduction

Precision attachment is one of the attachment, usually used in long-span fixed partial denture with distal extension most likely a Kennedy's class 1 condition arch where there is no posterior support from the tooth. It has historic value of advantage. It is the combination of cast-partial(removable partial denture) and fixed partial denture. It is usually used in area of cantilever as precision attachment provide an equal and balanced force distribution to the retainers. Any unbalanced forces during mastication will be eliminated. There are two types of precision attachment which include intra-coronal precision attachment, extra-coronal

precision attachment, semi-precision attachment. The intra-coronal precision attachment is where the attachment is present intra-coronally at the level of the gingiva. It is usually preformed which is modified based on the patient's need. It is more aesthetics as no metal frame-work is exposed in the aesthetic zone. The extra-coronal attachment employ use of clasp. This type of attachment is usually not used as it is un-aesthetic. This is due to the exposure of the metal framework in the aesthetic zone. The semi precision attachment is not preformed like the other types. It is custom fabricated for each patients. It also provide equal aesthetics as the intra-oral precision attachment. It is more precise and accurate as it is custom fabricated for each patients. Thought it has many advantages professionals commonly avoid this due to complexity of the design, and cost of the prosthesis that is affordable by the patient. The precision attachment needs more sound practical and theoretical knowledge by the professional. So this is a technique sensitive procedure.¹⁴⁻¹⁸ This study involves accessing the awareness about the use of precision attachment in fixed partial denture among the dental students.

2. Materials and Methods

Dental undergraduate students and postgraduate students who were on the studies in and around Chennai TamilNadu was accessed. Survey planet which is one among the online live survey software was used in collecting information from the students in this survey (Courtesy: <https://surveyplanet.com>). Series of questions were computed based on precision attachment and were shared among the undergraduate and postgraduate students across different Dental Institutions. The percentage of each category (first year, second year, third year, final year, intern, postgraduate students) of students was accessed separately and were graphically analysed.

3. Results

The results were obtained using the survey planet software. The percentage were calculated for each question and accessed

Chart 1

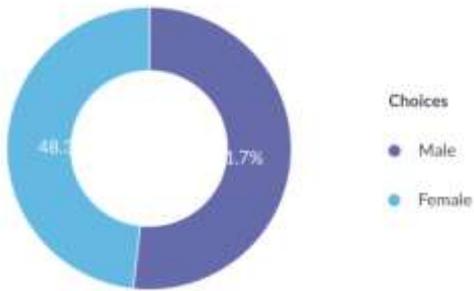


Chart 2

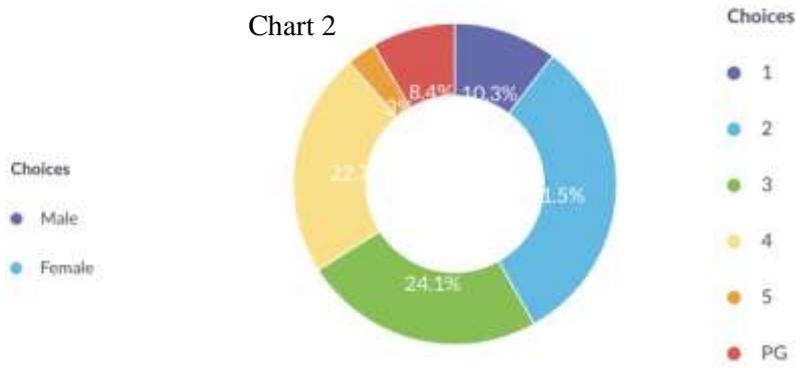


Chart 3

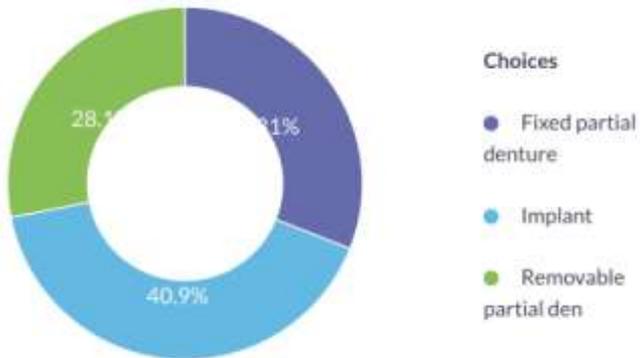


Chart 4

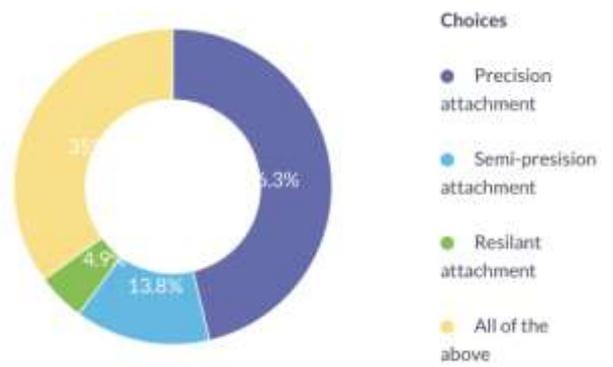


Chart 5

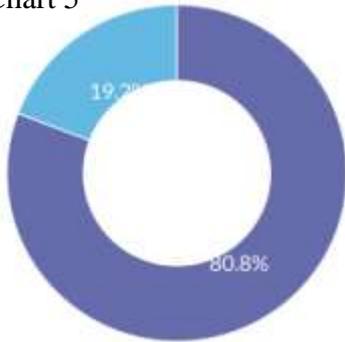


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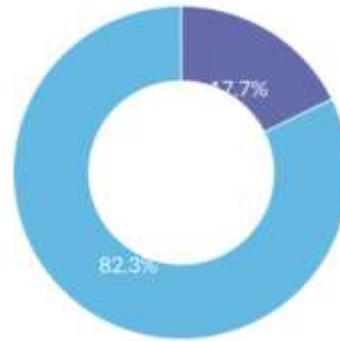


Chart 7

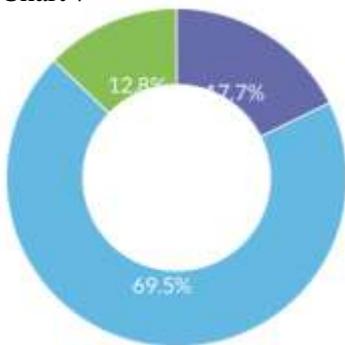


Chart 8

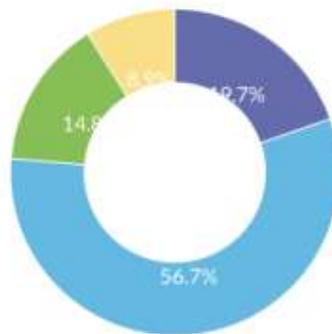


Chart 9

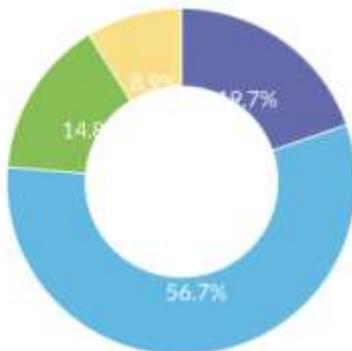


Chart 10

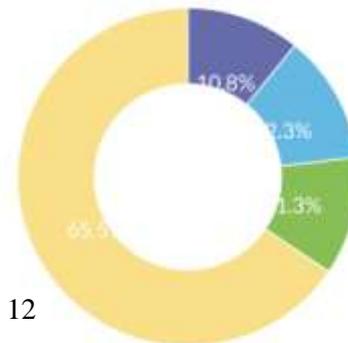
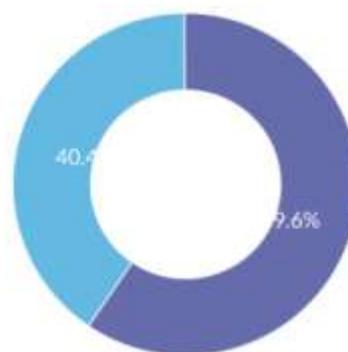
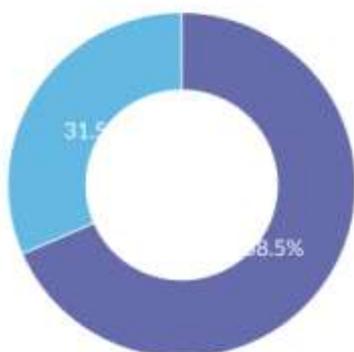


Chart 12

Chart 11



4. DISCUSSION

In the present society, patients approach a dentist for two main reasons; discomfort or Aesthetics. The dental professional must be able to relate to the patient's concerns, both physically and psychologically. As per each persons requirements restoration of smile in each patient vary as there will be a different clinical condition in each patient. So customisation of the treatment options plays an important role. The treatment should be as preservative as possible and the patient's immediate need should be met first before any comprehensive restorative or prosthodontics treatment.

Precision attachment is a type of intraoral attachment used in replacement of edentulous posterior teeth. It is precise and has a high success rate. A high knowledge about the precision is required to guarantee a good treatment outcome as it depends on the skill of the dentist himself. So a sound knowledge about prosthetic replacement play a vital role. This will make us to realise a error in the prosthesis during the treatment, during trials of the prosthesis so as to locate it and eliminate it in the early party of the treatment. This will ensure the prosthesis given to the patient is perfect. By this we will be able to increase the patient confidence and the reliability of a good prosthesis. The precision is a fixed removable type of prosthesis where the anterior most teeth act as a abutment. Based on the span length number of abutment teeth is selected. To the anterior teeth is where the retainer is placed. From the retainer ie..., from the distal end of the retainer a metal framework is fabricated. The end of the prosthesis is where the locking device is present. With the support of the locking device posterior teeth is fabricated and inserted.

In the current study the awareness of precision attachment usage was assessed. Basic idea of the attachment was aimed. In the present study there were of 206 participants. (chart 2)Of which 12% were 1 year, 22% were second year, 32% were third year, 23.3% were final year, 18.6% were postgraduates. (chart 3)The preferable choice of replacement was the next question; 28.3% wished to go for removable partial denture first then 41.3% wished to go for implant prosthesis and 30.6% wished to go for fixed partial denture. Then precision attachment is which type of attachment was positive for 80.6% which is an intra-coronal attachment. Then aesthetics of attachment was accessed and 82% were true for intra-coronal attachment. (chart 7,8,9)Then the components of a precision attachment was asked and in that 69.4% students answered positively that is Matrix and Patrix; assessing this the distinguish between male and female component was done which 56.3% gave positive answer for male component and 47.8% students gave the positive answer for female component. (chart10)As there are different intra-coronal coronal attachment used the which one is used as an intra-coronal one and about 65% present gave answer for all of the above. (chart 11)Since the fabrication method differs which one was the pre-fabricated one was the next question and about 68% percent of them gave the positive answer.

5. Conclusion

By this study we can see the student is moderately aware of precision attachment. In the era of developing Dental Implatology students should also know about the other prosthetic replacement. This will enable the professionals to do a perfect treatment with a perfect and a correlating treatment plan for the particular specific patient.

6. Reference

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