



RESEARCH ARTICLE

KNOWLEDGE, AWARENESS AND PRACTICE REGARDING THE USE OF TRANSITIONAL IMPLANTS

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ABSTRACT

Aim: The aim of this study was to assess the knowledge and awareness amongst the dental students on the use of transitional implants.

Material and Methods: This study was a well-structured online questionnaire based awareness study. This study was conducted among the students of Saveetha dental college. 213 participants took up the survey. The questionnaire consisted of 10 multiple choice questions. The questions were based on knowledge of transitional implants including the various advantages and uses of transitional implants. Once the students answered the questionnaire, the response was gathered and the results were tabulated.

Results: From this study, it was found that 166 participants have heard about transitional implants, 118 participants have seen patients with transitional implants. 124 participants have opted transitional implant is economical. 42.8% have chosen, it can be used as a provisional treatment in both completely edentulous and partially edentulous patients and 54.2% have said that transitional implants cannot be used as a surgical guide.

Conclusion: Although the awareness among the dental practitioners is satisfactory, the application of transitional implants should be reinforced and followed on a regular basis in the curriculum.

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INTRODUCTION

The concept of osseointegration, i.e. direct anchorage of pure/alloyed titanium in the jaw bone, was a great breakthrough in oral rehabilitation (Babbush, 2001). Transitional implants are narrow diameter implants that were developed to support provisional fixed restorations during the phase of osseo-integration of the definitive implants and are usually placed simultaneously with definitive implants. These provisional implants were developed to support an implant-supported fixed prosthesis or overdenture to provide retention, stability, and support (Froum, 1998). They are placed in a non-submerged fashion in a single stage surgical procedure and are designed to be immediately loaded. Typically they are placed between the definitive implants, following a set of guidelines, as discussed subsequently, and allow for their load free osseointegration. The patient can function normally and at the same time have good esthetics and phonetics with the help of good provisional/temporary restorations fixed to such transitional implants. They are removed with manual tools at the end of the provisional phase. The definitive implants are then restored according to the main treatment plan.

Transitional implants permit immediate replacement of the patient's missing dentition and enabling the patient to experience the benefits of implantology immediately. The other uses that have been documented for transitional implants are: To provide a fixed provisional for protecting an osseous grafted site, to provide stability to the surgical stent during implant placement, to provide a vertical stop for a fixed prosthetic reconstruction during the healing period (Alam, 2005; Simon, 2002; Yeh, 2005). To eliminate need for a temporary tissue borne restoration, act as an orthodontic anchor for quick and effective movement of other teeth (Huang, 2005; Ohkubo, 2004). Though the transitional implants are not used for provisionalisation in these situations, transitional implants are also used to stabilize the existent dentures (Chowdhary, 2010). It is also used to replace congenitally missing maxillary lateral incisors and repair of broken bridges. Today, for most clinical situations, completing pre-operative treatment without providing transitional implants is an incomplete treatment plan at best. Knowledge about transitional implant among the dental profession is important as it helps in the diagnosis and treatment planning. This study aims at finding the knowledge and attitude among dental students in Saveetha Dental College on the use of transitional implants.

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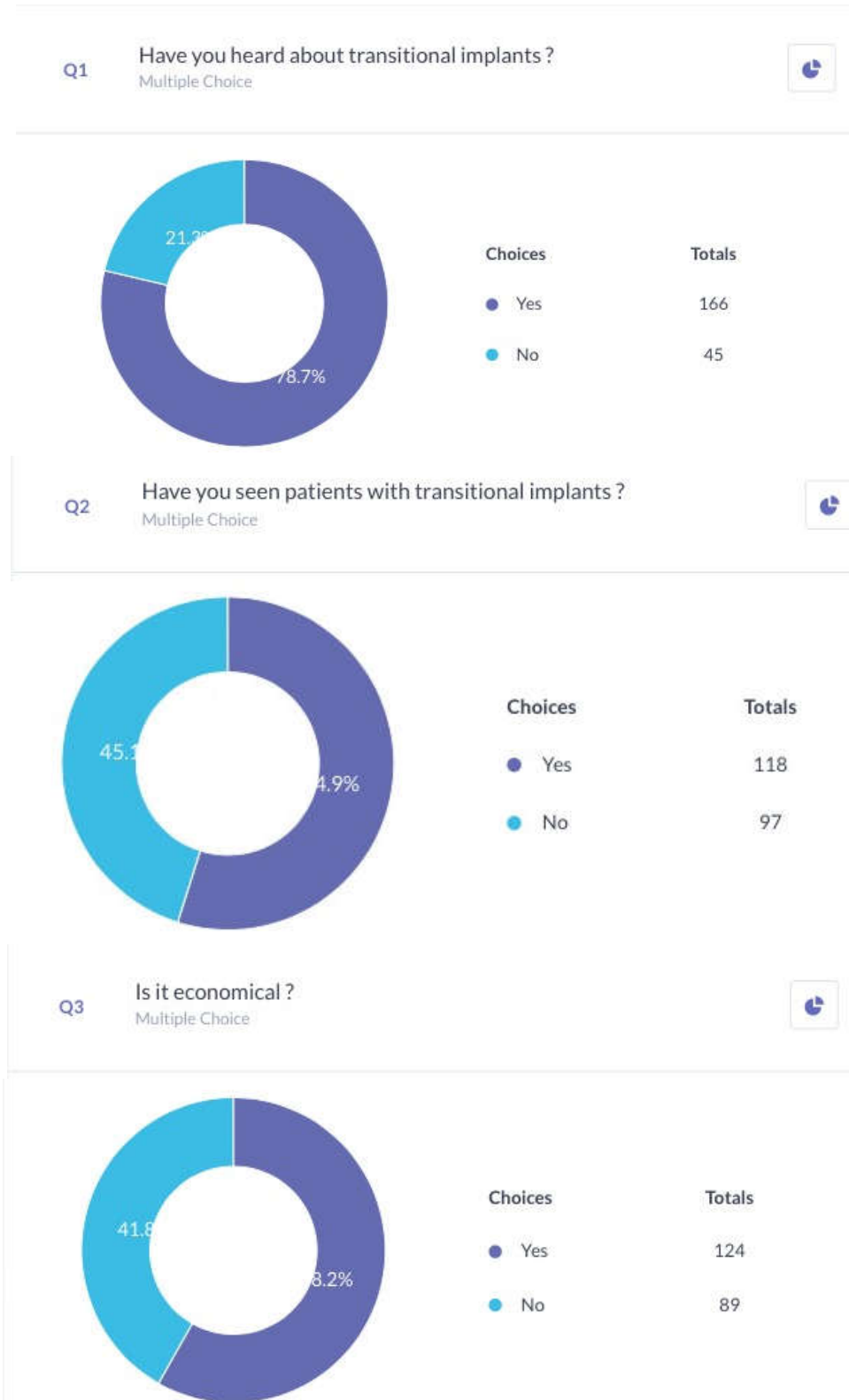
MATERIALS AND METHODS

This study was a well-structured online questionnaire based awareness study. This study was conducted among the students of Saveetha dental college. 213 participants took up the survey. The questionnaire consisted of 10 multiple choice questions. The questions were based on knowledge of transitional implants including the various advantages and uses of transitional implants. An online survey was conducted and they were asked to fill the questionnaire for which ample time was provided.

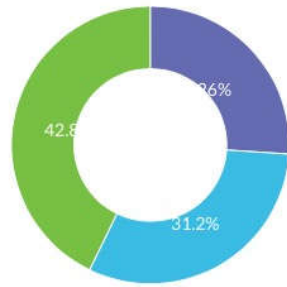
The statistical analysis on the gathered data was carried out and the data was expressed as mean or percentage of participants correctly responding to each question. Once the students answered the questionnaire, the response was gathered and the results were tabulated.

RESULTS

The survey was conducted among 213 dental students. This sample size of this study is sufficient to give an idea of the current practice of management of transitional implants.

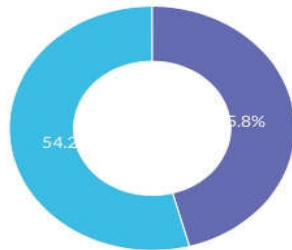


Q4 It can be used as a provisional treatment in
Multiple Choice



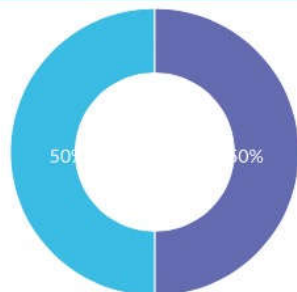
Choices	Totals
● Completely edentulous patient	56
● Partially edentulous patients	67
● Both	92

Q5 Are you aware that it can be used as a surgical guide ?
Multiple Choice



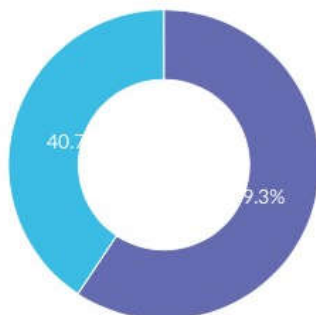
Choices	Totals
● Yes	98
● No	116

Q6 Are you aware that it can be used to evaluate sufficient graft thickness?
Multiple Choice



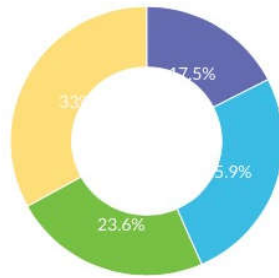
Choices	Totals
● Yes	106
● No	106

Q7 Are you aware they can maintain stable vertical dimension?
Multiple Choice



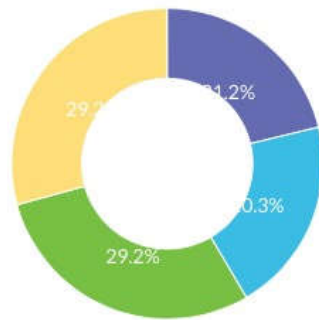
Choices	Totals
● Yes	127
● No	87

Q8 Advantage of transitional implants include
Multiple Choice



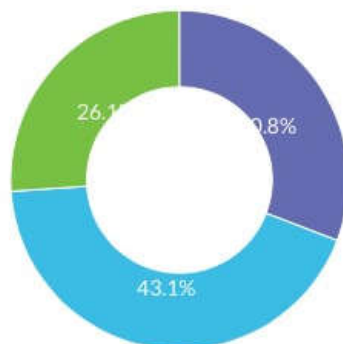
Choices	Totals
Stability and support	37
Denture retention	55
Patient comfort	50
All of the above	70

Q9 Transitional implants are used to
Multiple Choice



Choices	Totals
Stabilize existent denture	45
Replace congenitally missing maxillary lateral incisor	43
Repair broken bridges	62
All of the above	62

Q10 It can be screwed into place manually by a hand wrench or mechanically with a latch wrench at a speed of
Multiple Choice



Choices	Totals
50 rpm	65
60rpm	91
70rpm	55

From this study, it was found that 166 participants have heard about transitional implants, 118 participants have seen patients with transitional implants. 124 participants have opted transitional implant is economical. 42.8% have chosen, it can be used as a provisional treatment in both completely edentulous and partially edentulous patients and 54.2% have said that transitional implants cannot be used as a surgical guide. 59% of the participants have seen patients with transitional implants. 59.3% of the respondents were aware that the transitional implants maintain vertical stable dimension.

DISCUSSION

Replacement of missing teeth by means of implant supported prosthesis for esthetic and functional rehabilitation has turned out to be an established and extensively used treatment modality in dentistry. In this study, 1013 respondents in the present study, majority of those who had heard of dental implants were amongst the 21-40 year age group (54.5%) and with the education of university level or higher (62.3%) (Chowdhary, 2010).

This can be attributed to the increased interest in dental treatment amongst the younger generation and changing attitudes towards the advancements in medical and dental technology. Chowdhary et al., (2000) that stated respondents in the age groups of 25 to 44 with a college or university education were more aware of dental implants in India. In the present study, 78.7 % of the respondents felt moderately well informed regarding the presence of transitional implants. Thus it is imperative to endorse dental implant and upsurge the awareness of such advanced treatment modalities in the society. Berge et al. (Berge, 2000), conducted a study in Norway and claimed people of ages 45 and above with a high level of education were well informed about dental implants. Transitional implants are contra indicated when there is less than 10 mm of cortical bone available for good anchorage and initial stability. There is insufficient space available to place a sufficient number of implants to anchor the fixed provisional restoration (Babbush, 2001).

If the transitional implant is shortened because of lack of bone height, the bio-engineering of the case should be reviewed and consideration should be given to placing additional implants to increase the support. The main drawbacks of transitional implants is that there will be difficulties in fitting mini dental implants in people who have larger sinuses. The sinuses can protrude too far into the mouth, preventing safe fitting. Mini dental implants also have to be fitted in groups to have maximum benefit. Fitting only one or two teeth cannot be supported as effectively, that is there will be a need to have multiple teeth replaced to make them worthwhile. For these reasons, more clinical studies are needed to assess their value in long term performance and patient's satisfaction along with techniques and to overcome the associated problems.

Conclusion

Although the awareness among the dental practitioners is satisfactory, the knowledge, attitude and awareness on the use

of transitional implants provide a need to educate and motivate them for the management of the same on a regular basis in the academical curriculum. Further, seminars and workshops should be held to improve the knowledge on transitional implants.

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