

# A CROSS SECTIONAL SURVEY TO ASSESS THE IMPLANT PRACTICE PROFILE IN VIDARBHA REGION

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## ABSTRACT:

**Objectives:** Dental implants have revolutionized the dentistry since its inception. Implant supported prostheses provide an effective and durable replacement for missing natural teeth. Dental implant treatment is regarded as the predictable procedure .There is no published data available regarding the implant practice profile of the dental practitioners in Vidarbha region of Maharashtra. The main aim of this study was to describe the dental implant practice profile of this region

**Methods:** The target study population was the dental practitioners practicing in Vidarbha region. The sampling was done with the help of the list of registered dentists published on the website of the Dental Council of India on March 2010. A self administered questionnaire was designed and was validated. The questionnaire was sent to the practitioners in the region. The data was obtained and analysis was performed using the Statistical package for the Social Sciences (Windows version 12.0; SPSS Inc.)

**Results:** Out of the 315 questionnaires, 260 were received. Thus the response rate was 82.54%. 250 completed questionnaires were finally selected for the analysis. The male dental practitioners were 120 (48%) and 130 female (52 %).Insufficient knowledge and lack of training at the undergraduate level was the main factor (90.47%) for not practicing the implantology

**Conclusion:** This study revealed that more than half of the general dental practitioners (68.2%) are practicing implant dentistry. Most of the dental professionals are not practicing implant dentistry because of insufficient knowledge and lack of proper training.

**Clinical significance:** Such type of information will be useful for preparing the baseline data for future planning of continuing dental education for the dental practitioners.

**Key words:** Osseointegration, Implant practice profile, Dental practitioners

## INTRODUCTION:

Dental implants have revolutionised the dentistry since its inception. Implant supported prostheses provide an effective and durable replacement for missing natural teeth. Dental implant treatment is regarded as the predictable procedure provided proper patient selection is done and appropriate

surgical technique is used. Vidarbha is the part of Maharashtra state where a number of dental practitioners provide dental implant treatment. But there is no published data available regarding the implant practice profile of the dental practitioners in this particular region. Such type of information will be useful

for preparing the baseline data for future planning of continuing dental education for the dental practitioners. The main aim of this cross sectional study was to describe the dental implant practice profile of this region

## **MATERIALS AND METHODS:**

The study was approved by the Institutional Ethics committee. The target study population was the general dental practitioners practicing in Vidarbha region. The sampling was done with the help of the list of registered dentists published on the website of the Dental Council of India on March 2010. The registered dental practitioners who are in general dental practice for more than one year were included in this cross sectional survey. Dentists with MDS qualification in Prosthodontics, Oral and Maxillofacial Surgery and Periodontics were excluded from this study as they have implantology in their post graduate curriculum. Systematic sampling with sampling fraction of one fifth was adopted. A self administered questionnaire was designed and was validated. It was comprised of two parts. The first part consisted of the demographic information including age, sex, years of practice. The second part consisted of multiple choice questions related to the implant practice profile. The questionnaire was sent with a covering letter and addressed envelope to the participants. All the participants were requested to return the completely filled questionnaire within three weeks. The reminder was sent to all the

respondents after two weeks. Out of the 315 questionnaires, 260 participants responded. 250 questionnaires were completed. Thus, the final sample size was 250.

The data was obtained and analysis was performed using the Statistical package for the Social Sciences (Windows version 12.0; SPSS Inc.)

## **RESULTS:**

Out of the 315 questionnaires, 260 were received. Thus the response rate was 82.54%. 10 questionnaires were incomplete. Therefore, 250 completed questionnaires were finally selected for the analysis. The male dental practitioners were 120 (48%) and 130 female (52 %) amongst the respondents. 133(53.2%) of the practitioners had been in practice for more than 10 years and 33(13.2 %) had less than 5 years practice experience. 75.6% of the respondents reported that 5-7 patients per month enquired about the implant treatment and remaining respondents had more than seven patients enquiring about dental implants. Implant dentistry is practised by 67.2 % of the respondents of the study. (Fig. 1)

Out of these respondents 135 (80.35 %) of them performed surgical as well as restorative phases. Remaining respondents consult oral surgeons for the surgical placement of dental implants.

Continuing dental education programmes were found to be the main source of training in this specialty (59.52

%) of the respondents. Certificate courses or modules arranged by the faculties were opted by 60 (35.71 %) and (4.77 %) learned the formal training in implantology.

Most of the respondents (127) treated less than five implant cases and only (41) provided this treatment to more than five patients.

Cost effectiveness (90.47%) was the commonest determining factor for the selection of the implant system followed by ease of use (5.92%), and (3.61%) patient preferences. (Fig. 2)

Insufficient knowledge and lack of training at the undergraduate level was the main factor (90.47%) for not practising the implantology and remaining of the respondents thought that patients could not afford this treatment.

Most of the respondents who are not practising implant dentistry were interested in participating in continuing dental education programmes in this specialty and were planning for providing this treatment to their patients in near future.

## DISCUSSION:

The concept of osseointegration was introduced at the Toronto Conference in 1982. Since then dental implants have been extensively used to replace missing teeth. Various studies have proven that implant supported prostheses are conservative and predictable with regard to long term success in uncomplicated

cases.<sup>(1)</sup> General success rate of 90 % has been reported.<sup>(2,3,4)</sup> In the developing country like India this treatment modality has not been preferred commonly. The undergraduate curriculum does not include this specialty in details. Therefore, implantology was not included in their practice. Over past ten years, awareness regarding implantology is increased. But little is known about the pattern of implant practice by the practitioners in the Vidarbha region of Maharashtra. This survey is the first of its kind in Vidarbha.

The response rate of this survey was (82.54%). The present survey found that more than 50% of the dentists in the region are practising implantology. But considering the number of implants placed surgically per month, this specialty forms a very small segment of the practice. A very few number of dentists are placing more than five implants per month. The findings of this study have shown lack of knowledge and training is the influencing factor in addition to affordability of the treatment by the patients for not practising the implantology. The exact figures for the dental implant market are not known. But considering the number of respondents practising implantology in their practice, this would form a very less share of dental practice profile of the region. Initially implantology was practised by the Oral Surgeons and Prosthodontists. But the recent past has witnessed the simplification of the procedure with the help of advanced tools. This must have motivated the

dentists to provide implant treatment. The results of this study have shown that most of respondents are practising surgical and restorative phases in their practice setup. Many studies have proved that surgical placement of implants in simple cases like single tooth implant can be performed by the dental professional who received adequate training in implantology.<sup>(5,6,7)</sup> The study carried out by Henry PJ, Rosenberg IR, Bills IG, et al <sup>(8)</sup> compared the results of cases of single tooth implants treated by general dental practitioners with that of the specialists in implantology. It proved that the simplified instrumentation, strict adherence to the protocol for restoring the simple cases could favour the optimal dental care.

In view of wide clinical acceptance and patient demand for dental implants there is the need to initiate the proper training of implantology. Dental colleges constitute the major part of formal dental education at undergraduate and postgraduate level. Therefore, these institutes should play a leading role in training the future dental professionals to practice implant dentistry effectively and efficiently. In this survey, only a small number of respondents reported postgraduate training as a source of training in this field. The university syllabus and Dental Council of India guidelines for postgraduate training offer dental implantology training for Oral and Maxillofacial surgery, Prosthodontics and Periodontology. There is hardly any provision for post graduate diploma or master degree in

oral implantology in Maharashtra. On the contrary, in developed countries like Australia, the United Kingdom and the United States, post graduate courses in implant Dentistry are provided to the students by the dental schools. Various commercial companies are providing short term courses and modular training. This is the main source of training for the respondents of this study. This is same as the world trend reported by Payant PJ, Williams JE, and Zwemer JD. <sup>(9)</sup> Hubner GR <sup>(10)</sup> reported in his study that inclusion of laboratory and clinical experience of implant dentistry in the undergraduate curriculum resulted in greater participation of general dental practitioners in implantology practice. Such measure should be implemented in our system while revising the dental curriculum. This would be an important step towards providing better oral health care to the masses of our country. The limitation of this study is that it was carried out in a small sample size. Further studies involving large samples from other regions of the state are necessary. Future implications of this study are that information collected will aid in future planning of the strategy for encouraging the implant practice in the region. It will help in identifying the need and expectations of the dental professionals to accept and practice oral implantology.

## CONCLUSION:

This study revealed that more than half of the general dental practitioners (68.2%) are practicing implant dentistry.

Most of the dental professionals are not practicing implant dentistry because of insufficient knowledge and lack of proper training. Most of the respondents who were not practising implantology expressed a desire to include dental

implants in their practice. This survey revealed a high demand for continuing professional development in implant dentistry in Central India.

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**FIGURES:**

