KNOWLEDGE AND AWARENESS ABOUT DENTAL IMPLANTS FOR TREATMENT OF MISSING TEETH IN PATIENTS OF BAHADURGARH, HARYANA

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ABSTRACT

BACKGROUND
The goal of modern dentistry is to restore the patient to normal functions. In India, there is very limited use of Dental Implants by general population. The reason being lack of knowledge and awareness among the masses. Limited studies exist on assessing the knowledge and awareness regarding dental implant treatment options among patients who want replacement of missing teeth. Hence, the present study was carried out to assess the knowledge and awareness towards the use of dental implants as the option for replacement of missing tooth/teeth.

MATERIALS AND METHODS
This is a cross-sectional study conducted among the patients visiting the OPD of Department of Prosthodontics and Crown and Bridge, PDM Dental College and Research Institute, Bahadurgarh, Haryana, between the period of March 2015 to February 2016. The survey was conducted through printed self-explanatory questionnaire, which included 9 questions in English as well as in Hindi with the intention to evaluate the knowledge and awareness of dental implants among the rural and suburban population of Bahadurgarh, Haryana.

RESULTS
The present study gives information about patient’s knowledge and awareness about dental implants for the treatment of missing teeth in Prosthodontic Department of PDM Dental College, Bahadurgarh, Haryana. Study population of all the age groups were selected for ease of access and to increase the response rate being the prosthodontic patients.

CONCLUSION
There is a need for more knowledge and awareness among general patients about dental implant treatment for missing teeth. This can be imparted by more dental education programme to enhance the level of understanding about merits of implant.

KEYWORDS
Dental Implants, Knowledge, Awareness, Prosthodontics.


BACKGROUND
The goal of modern dentistry is to restore the patient to normal functions, speech, health and aesthetics regardless of the atrophy, disease or injury of the stomatognathic system.\textsuperscript{(1)} Responding to this ultimate goal, dental implants are the ideal option for people in good general oral health who have lost a tooth (or teeth) due to periodontal disease, an injury or some other reasons. Dental implants provide the patient with a fixed anchor for a tooth/teeth that need not be removed at night or for cleaning as is there in removable prostheses. Implants also do not require preparation of healthy asymptomatic teeth. In addition, the edentulous patient is provided a prosthesis that is both stable and in most cases highly aesthetic. Dental implants were used originally for the treatment of edentulous patients and are associated with improved denture retention, stability, functional efficiency and quality of life.\textsuperscript{(2-4)}

Although, implants have been a successful option for replacement of lost dentition for nearly five decades. Their use in dental treatment plan is still in its youth, because of limited awareness among patients. Patient awareness of dental implants must be provided in choice of the most appropriate option.\textsuperscript{(5)} The problem is more magnified in the developing nations, where majority of population lacks education and awareness about dental implants as a treatment modality.\textsuperscript{(6)} The level of awareness of dental implants varies among several studies in different countries and demographic areas.\textsuperscript{(7)} According to a study by Zimmer et al\textsuperscript{(8)} among 120 American subjects, public awareness and acceptance of dental implants were found to be high as well as to have a general positive attitude towards dental implants.

In India, there is very limited use of Dental Implants by general population. The reason being lack of knowledge and awareness among the masses. Limited studies exist on assessing the knowledge and awareness regarding dental
implant treatment options among patients who want replacement of missing teeth. Hence, the present study was carried out in the Department of Prosthodontics, PDM Dental College, Bahadurgarh, Haryana to assess the knowledge and awareness towards the use of dental implants as the option for replacement of missing tooth/teeth.

MATERIALS AND METHODS

This is a cross-sectional study among the patients visiting the OPD of Department of Prosthodontics and Crown and Bridge, PDM Dental College and Research Institute, Bahadurgarh, Haryana between the period of March 2015 to February 2016. All the respondents were informed about the aims and objectives of the study. The survey was conducted through printed self-explanatory questionnaire, which included 9 questions in English as well as in Hindi with the intention to evaluate the knowledge and awareness of dental implants among the rural and suburban population of Bahadurgarh, Haryana. Sample size was calculated with the formula-

\[ N = \frac{z^2 \times P \times (1-P)}{E^2} \]

Where \( z \) = population area constant (1.96), \( P \) = probability of success taken at 50%, \( A \) = probability of failure taken at 50% and \( E \) = standard error taken as 5%. A total of 500 questionnaire forms were distributed among the subjects, out of which only 472 patients answered the questionnaire willingly. The demographic data of each patient including gender, age and education level were recorded before the survey. The surveyed population included males and females of all age groups ranging from 18-30 years, 31-45 years, 46-60 years and more than 60 years. The demographic data is shown in Table 1.

According to sample size calculation, we had to take more than 400 samples. We decided for 500 keeping in view that some patients will not reply, as we finally saw it was 28 no. of patients who did not reply. Sample size in anyways should not be below 400. Anything more will give better results.

RESULTS

The present study gives information about patient’s knowledge and awareness about dental implants for the treatment of missing teeth in Prosthodontic Department of PDM Dental College, Bahadurgarh, Haryana. Study population of all the age groups were selected for ease of access and to increase the response rate being the prosthodontic patients. In all 472 patients participated in the survey, \( M \) = 284 (60.12%); \( F \) = 188 (39.83%). Table 1 summarises about the demographic data and Table 2 depicts the survey data of patients.

<table>
<thead>
<tr>
<th>Demographic Data</th>
<th>No. and (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>284 (60.17)</td>
</tr>
<tr>
<td>Female</td>
<td>188 (39.83)</td>
</tr>
<tr>
<td>Age (in years)</td>
<td></td>
</tr>
<tr>
<td>18-30</td>
<td>94 (19.91)</td>
</tr>
<tr>
<td>31-45</td>
<td>127 (26.90)</td>
</tr>
<tr>
<td>46-60</td>
<td>145 (30.72)</td>
</tr>
<tr>
<td>&gt;60</td>
<td>106 (22.45)</td>
</tr>
<tr>
<td>Education</td>
<td></td>
</tr>
<tr>
<td>Upto School</td>
<td>345 (73.09)</td>
</tr>
<tr>
<td>College</td>
<td>115 (24.36)</td>
</tr>
<tr>
<td>Postgraduates</td>
<td>12 (2.5)</td>
</tr>
</tbody>
</table>

DISCUSSION

Dental implant treatment has been at the forefront of clinical dental practice for over a decade and a half now. With increasing rate of success of implant treatment, more patients are opting for dental implants as premier choice for replacement of missing teeth. However, a majority of Indian population is still unaware about the implants in dentistry. To assess the knowledge and awareness of implants among rural/suburban population, this study was carried out among the patients visiting the OPD of Department of Prosthodontics and Crown and Bridge, PDM Dental College.
and Research Institute, Bahadurgarh, Haryana. A total of 500 questionnaire forms were distributed among the subjects, out of which only 472 patients answered the questionnaire willingly.

**Ways to Replace the Missing Teeth**
When asked about the different ways to replace the missing teeth, 207 (43.8%) knew about Removable Partial Denture (RPD), which is in congruence with the study conducted by Satpathy et al\(^{(10)}\) (48.55%), while in studies conducted by Kohli et al\(^{(11)}\), Tomruck et al\(^{(12)}\), Kumar et al\(^{(13)}\) and Narayanan et al\(^{(14)}\) only 59%, 34.9%, 24.7% and 20.78% of the subjects respectively knew about RPD as treatment option for missing teeth. In the present study, 315 (66.73%) patients knew about FPDP as replacement of missing teeth which is in contrast to studies conducted by Kumar et al\(^{(13)}\), Narayanan et al\(^{(14)}\) and Tomruck et al\(^{(12)}\). 205 (43.43%) patients had a knowledge about complete denture, which is similar to studies conducted by Tomruck et al\(^{(12)}\) and Satpathy et al\(^{(10)}\).

**Effectiveness of Implants over other Methods**
315 (62.5%) subjects knew about implants as a substitute option for replacing missing teeth in present study, while only 25.9% knew about same options in study conducted by Kumar et al\(^{(13)}\). Tomruck et al\(^{(12)}\) and Satpathy et al\(^{(10)}\) had similar results in accordance with the present study about the knowledge of implant as a treatment option, while studies by Satpathy et al\(^{(10)}\) and Kumar et al\(^{(13)}\) show contrasting results about this question.

**Lifespan of Implant**
When asked about lifespan of dental implants 34 (11.5%) said it is less than 5 years, while 86 (26.15%) said it is 5 - 10 years. 115 (38.98%) said 10 - 20 years, while 60 (20.33%) said it is more than 20 years. Study by Satpathy et al\(^{(10)}\) and Alqahtani et al\(^{(18)}\) show different results when asked about lifespan of implants except that similar percent of people stated lifespan of implant to be between 5 - 10 years.

**Who should opt for Implant Treatment**
123 (41.69%) said everyone should go for implant treatment, while 172 (58.30%) said only rich people should opt for implant treatment. This is almost similar to the study conducted by Narayana et al\(^{(14)}\) in which 49.79% said everyone should opt for implant, while 50.45% said only rich should opt for implant treatment.

**Would you like to know more about Implants**
250 (84%) said they wanted to know more about implant treatment, while 45 (15.2%) said that they did not want to know about implants. The results were in accordance to the study by Alqahtani\(^{(18)}\) (82.6%) and Satpathy\(^{(89.35\%)}\).

**CONCLUSION**
There is a need for more knowledge and awareness among general patients about dental implant treatment for missing teeth. This can be imparted by more dental education programme to enhance the level of understanding about merits of implant.

**REFERENCES**

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