

Assessment of Knowledge Related to Implant Dentistry in Dental Practitioners of Patna, Bihar

Nishant Kumar Tewari¹, Aditi Sinha², Kunal Kundan³, Sushmita Tiwari³, Shraddha Pathak⁴, Rohan Pratap⁵

¹Dental Surgeon, Nalanda Medical college and Hospital, Patna Bihar.

²Prosthodontist, Gaya, Bihar.

³General Practitioner, Patna Bihar.

⁴General Practitioner, Kolkata West Bengal.

⁵General Practitioner, Bengaluru Karnataka.

Received: February 2020

Accepted: February 2020

Copyright: © the author(s), publisher. It is an open-access article distributed under the terms of the Creative Commons Attribution Non-Commercial License, which permits unrestricted non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

ABSTRACT

Background: Dental implants are becoming a popular choice replacing the missing teeth. In spite of the progress made in implant dentistry since its inception, there have been some loopholes in scientific based knowledge and established clinical experience amongst dental practitioners. The aim of the present study was conducted to assess the knowledge related to implant dentistry in dental practitioners of Patna, Bihar. **Methods:** The present cross sectional study was carried out among 104 private dental practitioners to assess the knowledge related to implant dentistry in dental practitioners of Patna. A multiple choice questionnaire was given to 104 private dental practitioners to answer. The questions were about some basic knowledge in dental implants and to assess practitioner's views and opinion regarding dental implant practice. **Results:** 75.96% dental practitioners were aware about dental implants and various systems in dental implants. 47.11% were aware regarding surgical technique in placing technique. 32.69% were aware about distance between two implants when placed adjacent to each other. 32.69% dental practitioners were aware about safe distance of dental implant from natural teeth. 65.38% said that dental implants can be placed in smokers, diabetic patients, patients with poor oral hygiene, and patients prone to dental caries. 30.76% were aware about additional surgical procedures performed to enhance successful implant placements such as bone grafting and sinus lift procedures. 35.57% were aware about immediate and delayed implant placement. 37.5% were aware about loading protocols such as immediate loading, early loading, and delayed loading. 28.84% dental practitioners practice dental implants in their practice. 65.38% dental practitioners present implant as a treatment option to their patients in replacing lost teeth. **Conclusion:** Our study concluded that knowledge about implant dentistry is still limited among dental practitioners. Knowledge regarding implant dentistry can be increased by organising various CDE programmes and workshops.

Keywords: Implant, dental implantology, practitioners.

1

INTRODUCTION

Dental implantology is the field of dentistry that is concerned with the replacement of missing teeth and their supporting structures with artificial prostheses anchored to the jawbone. Modern implants consist of an osseous part that interacts with the bone, a transmucosal component that interacts with the mucosa and then the restoration; this can be a crown or bridge abutment, or anchors for dentures. The materials used commonly for implants include commercially pure titanium, titanium alloys or occasionally ceramic materials (e.g. zirconium dioxide or aluminum oxide). Surfaces are normally roughened (microporous) through use of surface preparation (e.g. sand blasting and acid etching)

rather than being coated to increase the surface area available for osseointegration.^[1] Implant dentistry has evolved into the mainstream of restorative practices all over the world.^[2] It has mainly two phases; a surgical phase and a prosthodontic phase. For centuries, there were ways to replace the crown but not the root but root replacement is now possible.^[3] Because of the advantages like stability, increased retention, functional efficiency and better quality of patient's life, dental implants provide the best long term results and therefore has become the best treatment option available these days to replace the missing teeth.^[4] In addition to the dentists' attitude, economic considerations may also impact on the care provided to the patients. The dentists' knowledge and attitude toward a treatment modality can itself significantly influence treatment decision-making and ultimately "shape" how oral health care is provided and become the norm.^[5] Therefore, the present study was conducted to assess the the

Name & Address of Corresponding Author

Dr. Kunal Kundan,
General Practitioner,
Patna, Bihar.

knowledge related to implant dentistry in dental practitioners of Patna, Bihar.

MATERIALS & METHODS

The present cross sectional study was carried out among 104 private dental practitioners to assess the knowledge related to implant dentistry in dental practitioners of Patna, Bihar. A multiple choice questionnaire was given to 104 private dental practitioners to answer. The questions were about some basic knowledge in dental implants and to assess practitioner's views and opinion regarding dental implant practice.

RESULTS

In the present study total participating dental practitioners were 104. 75.96% dental practitioners were aware about dental implants and various

systems in dental implants. 47.11% were aware regarding surgical technique in placing technique. 32.69% were aware about distance between two implants when placed adjacent to each other. 32.69% dental practitioners were aware about safe distance of dental implant from natural teeth. 65.38% said that dental implants can be placed in smokers, diabetic patients, patients with poor oral hygiene, and patients prone to dental caries. 30.76% were aware about additional surgical procedures performed to enhance successful implant placements such as bone grafting and sinus lift procedures. 35.57% were aware about immediate and delayed implant placement. 37.5% were aware about loading protocols such as immediate loading, early loading, and delayed loading. 28.84% dental practitioners practice dental implants in their practice. 65.38% dental practitioners present implant as a treatment option to their patients in replacing lost teeth.

Table 1: Questions regarding implants dentistry

Questions regarding implants dentistry	Answers	
	Yes n(%)	No n(%)
Are you aware about dental implants and various systems in dental implants?	79(75.96%)	25(24.03%)
Are you aware about the following?		
surgical technique in placing implants	49(47.11%)	55(52.88%)
about distance between two implants when placed adjacent to each other	34(32.69%)	70(67.30%)
about safe distance of dental implant from natural teeth	34(32.69%)	70(67.30%)
Can you place dental implants in smokers, diabetic patients, patients with poor oral hygiene, and patients prone to dental caries?	68(65.38%)	36(34.61%)
Are you aware about additional surgical procedures performed to enhance successful implant placements such as bone grafting and sinus lift procedures?	32(30.76%)	72(69.23%)
Are you aware about immediate and delayed implant placement?	37(35.57%)	67(64.42%)
Are you aware about loading protocols such as immediate loading, early loading, and delayed loading?	39(37.5%)	65(62.5%)
Do you practice dental implants in your practice?	30(28.84%)	74(71.15%)
Do you present implant as a treatment option to your patients in replacing lost teeth?	68(65.38%)	36(34.61%)

DISCUSSION

Dental implantology is fast becoming a specialty in the field of dentistry.^[6] The absence of natural teeth is a health problem which not only results in compromised function but it also has a great impact on esthetics and psychological well-being of a patient.^[7] With rapidly growing use of dental implants, dental graduates may encounter more patients with dental implants. The monitoring and maintenance of those implants may then fall upon general dental practitioner.^[8] General practitioner should have the ability to maintain these implants and recognize associated pathology if present.^[9]

In the present study total participating dental practitioners were 104. 75.96% dental practitioners were aware about dental implants and various systems in dental implants. 47.11% were aware regarding surgical technique in placing technique. 32.69% were aware about distance between two implants when placed adjacent to each other. 32.69% dental practitioners were aware about safe distance of dental implant from natural teeth. 65.38% said

that dental implants can be placed in smokers, diabetic patients, patients with poor oral hygiene, and patients prone to dental caries. 30.76% were aware about additional surgical procedures performed to enhance successful implant placements such as bone grafting and sinus lift procedures. 35.57% were aware about immediate and delayed implant placement. 37.5% were aware about loading protocols such as immediate loading, early loading, and delayed loading. 28.84% dental practitioners practice dental implants in their practice. 65.38% dental practitioners present implant as a treatment option to their patients in replacing lost teeth.

Nagappa et al., 2016 conducted a study in Navi Mumbai in which above 75% of the Private Dental Practitioners were practicing implant dentistry.¹⁰

Butterworth et al., 2001 carried out a study in UK wherein only 49.5% of consultants provided implant retained restorations in UK.^[11]

Another survey of European dental schools conducted to determine the curricular structure, teaching philosophies, and materials used in undergraduate implant dentistry courses found that

undergraduate implant dentistry educational programs varied from school to school, yet a large percentage of schools agreed on certain topics, including the importance of including implant education in undergraduate dental programs.^[2]

Chaudhary et al. 2013 concluded that most of the graduate Private Dental Practitioners were not practicing implant dentistry due to lack of skills. This indicates a need to revise undergraduate dental curriculum at various dental schools to improve the knowledge and thus practice of implant dentistry.^[13]

A study conducted by Eckert et al. in 2012 where it was observed that younger prosthodontists expressed a greater desire to surgically place implants.^[14] This clearly shows that people who have long been in the dental profession still prefer conventional methods as a choice for the replacement of missing teeth.

CONCLUSION

Our study concluded that knowledge about implant dentistry is still limited among dental practitioners. Knowledge regarding implant dentistry can be increased by organising various CDE programmes and workshops.

REFERENCES

1. Adriane Yaeko Togashi, R. A. C., Mathalia Coimbra Pereira. (2014) Level of Knowledge of Dentists About the Diagnosis and Treatment of Peri-implantitis. *Dental Press Implantol*, 8, 9
2. Misch CE. The importance of dental implants. *Gen. Dent.* 2001;49:38–45.
3. Hatim NA, Al-Rawee RY, Tawfeeq BA. Criteria for selection of Implant cases. *Al-Rafidain Dent. J.* 2006;6:161–170.
4. Tenneti S, Hosadurga R, Hegde S, Kashyap R, Kumar A. Awareness, knowledge, and attitude of patients toward dental implants: A web-based questionnaire study. *Journal of Dental Implants.* 2015;5(2):93
5. Lang-Hua BH, Lang NP, Lo EC, McGrath CP. Attitudes of general dental practitioners towards implant dentistry in an environment with widespread provision of implant therapy. *Clin Oral Implants Res* 2013;24:278-84.
6. Mgbekwere U, Okoye L, Ekwueme O. A survey of the knowledge of dental implants as a choice in treatment of edentulous jaws among health workers in Government Dental Clinics in Enugu. *Ann Med Health Sci Res* 2011;1:91-5.
7. Bremner MD. The story of dentistry. In: Ehrlich Ann B, editor. *History of Dentistry in Modern Dental Assisting*. Brooklyn, N.Y: Dental Items of Interest Publishing Co; 1939. p. 3. 1985.
8. Young MP, Carter DH, Sloan P, Quayle AA. A survey of oral implantology teaching in the university dental hospitals and schools of the United Kingdom and Eire. *Br Dent J* 1999;187:671-5.
9. Hicklin SP, Albrektsson T. Theoretical knowledge in implant dentistry for undergraduate students. *Eur J Dent Educ* 2009;13:25-35.
10. Nagappa, R., Reddy, V., Naga, R., Vathare, A., Jadhav, S., & Jadhav, G. (2016). Knowledge, Attitude and Practice of the Dental and Medical Practitioners Regarding Dental Implants. *Jl of Int Oral Health*, 8, 44-52.
11. Butterworth, CJ., Baxter, AM., Shaw, MJ., Bradnock, G. (2001). The provision of dental implants in the National

- Health Service Hospital Dental Services-a national questionnaire. *British Dental Journal*, 190(2), 93-96.
12. Afsharzand Z, Lim MV, Rashedi B, Petropoulos VC. Predoctoral implant dentistry curriculum survey: European dental schools. *Eur. J. Dent. Educ.* 2005;9:37–45. doi: 10.1111/j.1600-0579.2004.00363.x.
 13. Chaudhary, S., Gowda, T., Kumar, T., & Mehta, D. (2013). Knowledge and attitudes of dental interns in Karnataka state, India, regarding implants. *J Dent Educ*, 77, 1365-70.
 14. Eckert SE, Koka S, Wolfinger G, Choi YG. Survey of implant experience by prosthodontists in the United States. *J Prosthodont* 2002;11:194-201.

How to cite this article: Tiwari NK, Sinha A, Kundan K, Tewari S, Pathak S, Pratap R. Assessment of Knowledge Related to Implant Dentistry in Dental Practitioners of Patna, Bihar. *Ann. Int. Med. Den. Res.* 2020; 6(2):DE29-DE31.

Source of Support: Nil, **Conflict of Interest:** None declared