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ORIGINAL RESEARCH

Assessment of cases of dental implants in known population- A clinical study

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***ABSTRACT*:**
Background: The use of dental implants to provide support for replacement of missing teeth. The present study was conducted to assess the cases of dental implants in known population. **Materials & Methods:** The present study was conducted on 86 patients who received dental implants of both genders. In all patients, location and type of bone were assessed. **Results:** Out of 86 patients, males were 48 and females were 38. In males, 64 and in females 52 dental implants were placed. In anterior maxilla 48, in posterior maxilla 12, in anterior mandible 40 and in posterior mandible 16 dental implants were placed. Type I bone was present in 45, type II in 50, type III in 14 and type IV bone was present in 7 patients. The difference was significant (P< 0.05). **Conclusion:** Authors found that in most of the cases, type II dental bone was present and maximum dental implants were placed in anterior maxilla and mandible.
Key words: Bone, dental implants, Maxilla.

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INTRODUCTION

Tooth loss is very common and it can happen as a result of disease and trauma; therefore, the use of dental implants to provide support for replacement of missing teeth has a long and multifaceted history.[1] Statistics provided by the American Association of Oral and Maxillofacial Surgeons show that 69% of adults ages 35 to 44 have lost at least one permanent tooth to an accident, gum disease, a failed root canal or tooth decay. Furthermore, by age 74, 26% of adults have lost all of their permanent teeth. Therefore, the use of dental implants reveals that about 100,000-300,000 dental implants are placed per year, which approximates the numbers of artificial hip and knee joints placed per year.[2]

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.[3] In recent years, there has been a vast amount of scientific development in implant design, geometry, materials and techniques in order to improve the ease of delivery and success of implant treatment. The majority of designs is cylindrical, or root form in geometry and almost exclusively endosseus, i.e. placed within the alveolar bone rather than subperiosteally or intra-mucosally.[4]The present study was conducted to assess the cases of dental implants in known population.

MATERIALS & METHODS

The present study was conducted in the department of Prosthodontics. It comprised of 86 patients who received dental implants of both genders. They were informed regarding the study and written consent was obtained. Ethical clearance from ethical committee was taken prior to the study.

Data such as name, age, gender etc. was recorded. In all patients, location and type of bone were assessed. Results thus obtained were subjected to statistical analysis. P value less than 0.05 was considered significant.

RESULTS

Table I Distribution of patients

Total- 86		
Gender	**Males**	**Females**
Number	48	38
Dental implant	64	52

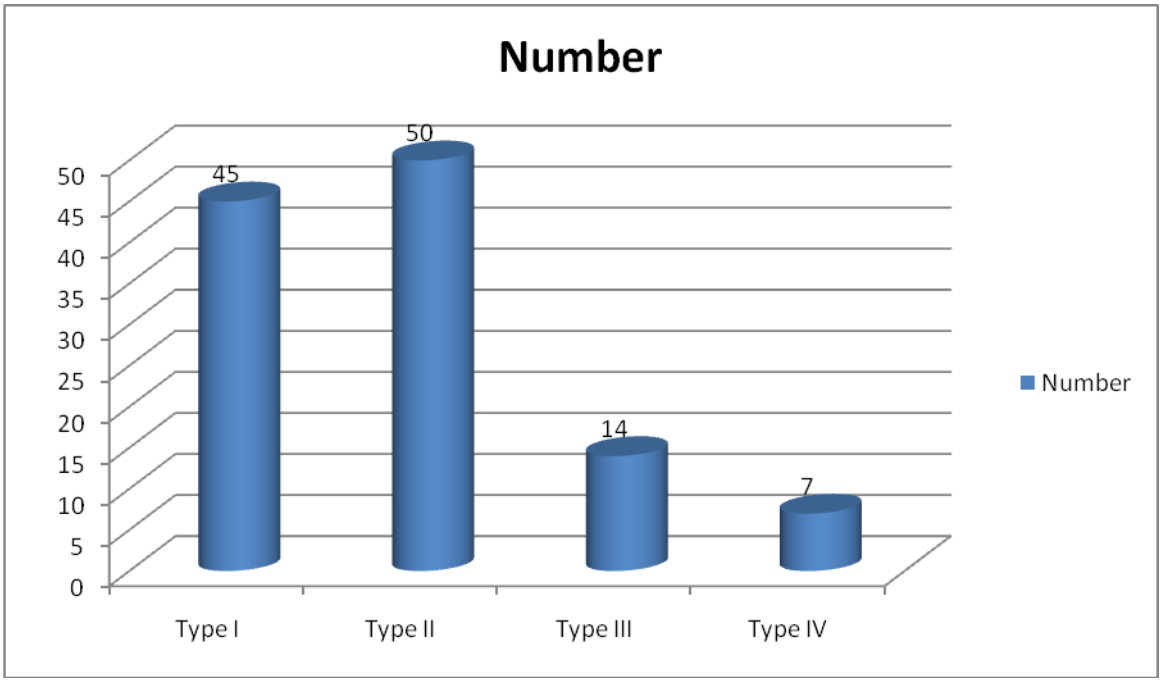
Table I shows that out of 86 patients, males were 48 and females were 38. In males, 64 and in females 52 dental implants were placed.

Table II Location of dental implants

Location	Number	P value
Anterior maxilla	48	0.01
Posterior maxilla	12	
Anterior mandible	40	
Posterior mandible	16	

Table II shows that in anterior maxilla 48, in posterior maxilla 12, in anterior mandible 40 and in posterior mandible 16 dental implants were placed. The difference was significant (P< 0.05).

Graph I Type of bone



Graph I shows that type I bone was present in 45, type II in 50, type III in 14 and type IV bone was present in 7 patients. The difference was significant (P< 0.05).

DISCUSSION

Different implant designs and procedures are being introduced constantly as implantology continues to evolve. These new products have been subject to varying levels of research and development and clinical documentation with the implications that some materials or procedures may prove to be less reliable or safe in routine use.[5] Since clinicians are bound by ethical and medicolegal responsibilities, the onus is very much on the treating dentist to select the most appropriate procedure or material depending on individual circumstances. In accordance with the current training standards guidance by the GDC, clinicians must ensure that the treatment they offer and undertake must be evidence based and patient-centered. The dentist must also use a contemporary decision-making process to critically appraise new products and techniques before using them, and must ensure they follow current clinical consensus.[6]The present study was conducted to assess the cases of dental implants in known population.

In this study, out of 86 patients, males were 48 and females were 38. In males, 64 and in females 52 dental implants were placed.

Manor et al[7] consisted of 117 patients that had a history of major medical illness while the control group consisted of 103 patients that did not reveal any history of existing medical conditions. In the study group, designated as group A, out of 117 patients, 57 were females, and 60 were males. In the control group, designated as group B, out of 103 patients, 48 were females, and 55 were males. Group A had 331 implants intact and in the healthy condition which amounted for 83.37% implant success. However, the group had 66 failed implants amounting to 16.63%. Group B had 287 implants intact and in the healthy condition which amounted for 89.96% implant success. However, the group had 32 failed implants amounting to 10.04%.

We found that in anterior maxilla 48, in posterior maxilla 12, in anterior mandible 40 and in posterior mandible 16 dental implants were placed. Type I bone was present in 45, type II in 50, type III in 14 and type IV bone was present in 7 patients. Buseret al[8] found that eleven studies of low to moderate methodological quality were studied. Implants placed in sites with history of one and two implant failures had a weighted survival rate (SR) of 88.7% (95%CI 81.7–93.3) and 67.1% (95%CI 51.1–79.9), respectively. Implants placed in sites with a previous early failure revealed a weighted SR of 91.8% (95%CI 85.1–95.6).

First implants presented higher SR than implants placed in sites with one or two previous implant failures. In contrast, implants placed in sites with one and two implant failures had similar SR.Mendoncaet al[9] found that out of 600 implants placed in bone with type I quality, 1 showed failure. Out of 1050 implants placed in bone with type II quality, 50 showed failure. Out of 500 implants placed in bone with type III quality, 30 showed failure. Out of 200 implants placed in bone with type IV quality, 5 showed failure.

CONCLUSION

Authors found that in most of the cases, type II dental bone was present and maximum dental implants were placed in anterior maxilla and mandible.

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