



A Survey on Awareness among the Undergraduates about the Knowledge of Implants in Dentistry

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ABSTARCT:

Dental implants are considered as the pioneer milestones in dental developments. These are widely used in various aspects of treatment modalities. A well Osseo integrated implant can be used as an alternative replacement for removable prosthesis used. Understanding the basic concepts of implants and its modifications definitely helps in improving the quality of dental treatment and also provides aesthetic satisfaction for the patients. Implants plays a crucial role in treatment planning and maintenance therapy as well. The development of implants in dentistry is definitely a matter of better successful treatment rates.

KEY WORDS: Implants, Components, Absolute contraindication, Placement of an implant, Osseointegration

BACKGROUND:

INTRODUCTION:

The survey was conducted to enlighten the concept of implants in undergraduates through online surveys. The questionnaire given consisted of various aspects of implants including the introduction, etiologies covering a brief concept regarding the indications and contraindications. Knowledge regarding the basic diagnosis as well as the treatment modalities of implant placement were also included. The success of any treatment procedure depends on understanding the prime concepts of its post complications too. A vague idea regarding the modern advancements in the field of implantology is also included.

The prime idea behind the survey is to analyze the knowledge on implants and its usage among undergraduates. The statistical analysis then obtained emphasizes the region of concepts where the students must be more educated. Since implants are the new catch in dentistry its important to have basic knowledge about it.

AIM:

The present survey was aimed at creating an awareness among undergraduates about the knowledge of implants in dentistry. The various aspects of implantology including its development, indications and contraindications, the procedure of placement and concept of osseointegration were included to improve their knowledge on implants.

METHODOLOGY:

Approval of the ethical committee of the university was obtained and the survey conducted after the informed consent of the students.

The survey was conducted in an online based questionnaire format in google forms and was sent to various group of undergraduate students. The responses of each question among 100 students are collected, summarized and analyzed. The statistical analysis through percentage is then interpreted and a conclusion is formatted.

STATISTICAL ASSESSMENT:

The data upon the survey showed that a mere amount of 10% of the students weren't aware of the use of implants, however the knowledge to the procedure showcased on even split at 41-43%.

68.7% of the students were correctly aware of the material used and an astounding percentage of 53.6% were aware of the first developer of implants with a similar percentage exhibited in the awareness of the components at 53.1%. The lack of information regarding the implant analogues was at 40.8% and 51% of the students was not aware about the implant procedure.

Whereas 58.6% students were aware of the correct age, a majority opined a lack of any absolute contraindication, standing at 52%. Lastly there was a lack of awareness with reference to the placement time of implants with only 38% students knowing the correct time and a must 37% of them were even aware of immediate implants. 33% of the students were only aware about the correct radiographic examination method, however 50% students stated uncontrolled diabetes mellitus as an absolute contraindication. 70% of the students had knowledge of the abutment placement.

The students showed exceptional accuracy in relation to bone loss and bone density at 57.3% and 49% respectively with the awareness of the healing period at 41.2%. As suggested earlier there was a lack of knowledge with respect to the procedure with only approximately 33% students aware of implant placement procedures.

59.6% students were aware of osseointegration but only 39.2% aware about the inventor, but this is without inferal. The majority were aware of the stability aspect of the implant at 41.8% and 53% aware of the jaw with maximum rate of failure as well as the complications with 64.9% awareness and accuracy of peri implantitis.

Although the aspect of distribution force, highly contested the majority at 42.9% were accurate however only 34.7% were aware of advanced procedures like LANAP.

DISCUSSION:

The survey conducted shed light on impediments, earlier unknown as well as previously acknowledged ones which haven't yet been emphasized upon.

Awareness among the undergraduates about the use of implants in dentistry was discussed, out of which most of the people were aware about the procedure, whereas few around 10% weren't aware about the implants at all. Improving the theoretical knowledge through classes and clinical exposures to undergraduate students would improve the situation.

The knowledge regarding the history of implants and advancements of materials used in implants plays an important role as they are the basics for the proper treatment modalities. The given survey showcased a moderate range of knowledge among the students regarding this. Hence proper theoretical classes must be designated.

Understanding the basic components and structures play a pivotal role in the fabrication and placement procedures of implants. With a statistical analysis of 53% students understanding this concept, focuses on the need of improving discussions, and clinical demonstrations.

The fabrication of implants in laboratory as a prosthesis that helps in proper positioning of implants in patient's mouth is important for the ease of future placement. Around 41% of the students lacking in understanding this concept, which is definitely an area of concern, which can be improved through theoretical as well clinical exposure to the students.

Age being considered as one of the key criterions, the necessity for a practitioner to understand and analyze the growth pattern is crucial. Though a good range of students of 59% are correctly aware about the importance of puberty and growth pattern, the remaining must be enlightened.

Being aware about the important indications and contraindications of any procedure helps in better prognosis. The influence of any factor that retards the proper functioning of an implant must be always addressed. When viewed through the analysis, Diabetes mellitus was contemplated as the most common contraindication for placement of implants by 50% of the students.

The site of implant placement must be evaluated and studied so as to create an accurate placement site for prolonged success. The radiographic method for its analysis is of prime importance, a rate of only 33% of students being aware of cone beam computerized tomography as the most accurate method for radiographic examination, showcases a necessity for more awareness regarding the radiographic methods used in dentistry. This can be improved through educating students about the basic uses and techniques. This will not only help in development of theoretical knowledge, but will also help with various aspects of clinical practices.

Placement of implants include various concepts including its position, the minimum distance required for adequate functioning, the concept of appropriate bone density and type of bone suitable for placement of implants. Around 70% of the students are correctly aware of about the appropriate distance between an implant and tooth during placement. The remaining unaware students could be educated through clinical exposure which could be improved through various CDE programs.

Knowledge and exposure towards the type and amount of bone loss occurring after the implants must be thoroughly studied and understood. This knowledge will help in taking various steps preceding to the final placement. The realization and comprehension on the amount of marginal bone loss occurring during the period of placement followed by its progression throughout the year is an important matter of concern. Around 40% of the students participated in the survey wasn't aware about this concept, which is unquestionably a matter to bother. This fact is an important step, while planning an implant for the patient. Proper surgical protocol should be included in the must known topics for undergraduates.

Healing period after the placement and the minimum time required for placement of implants in extraction sites are key notions to be studied. A range of only 41% of the students being conscious of this topic is definitely a matter to be more focused on. This can be improved by discussions and classes on the after effects of implant placement.

Placement of implants involve plenty of key concepts. A student must be aware not only about the type and indications of implants, they must be educated about the placement sites and the basic complications that could arise due to its inappropriate placement. This can be achieved through basic classes and interpretation skills of students on the radiographic landmarks on maxilla and mandible. There is also need for conducting hands on workshops for the students. The site of placement is an important factor to be enlightened on as it is the key factor for success of implant placement.

Osseointegration is definitely a topic to be widely discussed and engrossed on. It's just not a mere topic of discussion but a key feature that determines the success of implant placement. Around 60% of the students were aware about this concept, and the remain can be tutored through visual video demonstration and theoretical classes. The concept can be more discussed through articles and other referrals. The history about osseointegration including the inventor was definitely not a topic that was familiarized to a lot of students, which can definitely be improved by focusing the theoretical aspects.

Functional stability of any implant is achieved through the proper techniques and placement modalities. A thorough understanding about the functional stability and biomechanical adaptation of an implant is of at most importance. In the survey conducted, around 41% of the students were only clear about the above-mentioned concept. This can be achieved by introducing the students to the post implant placement case studies and help them clinically visualize the changes happening during the process of placement.

The knowledge regarding the success rate of placement of implants depends on the site of placement. Mandibular implants have more success rates. An approximate rate of 60% of the students were aware about this concept. The others can be enlightened about this feature by focusing on the anatomical concepts, the type of bone and the bone density involved in mandible and maxilla separately. A clear idea about this can be educated through various radiographic interpretations done and also with the help of article discussion about post implant functional and biomechanical stability with regards to maxilla and mandible.

Along with the success rate of implants, its complications after the placement must be definitely considered. This helps in the correct methodology of implant placement and also plays a crucial role in minimizing the failure rates. Peri implantitis is a concept to be discussed in detail since it has a direct correlation with the duration of success of implants. Around 30% of the students attended the survey weren't aware about it, and this idea can be inculcated through a sound approach through direct clinical exposures to the patients.

Advancements in any technique must be well studied and interpreted. This helps in improving the quality and also minimizes the time consumption of any procedure. The use of LANAP in implantology was the current concept, only 35% of the students had awareness on this concept. To improve this the students should be educated not only the basic concepts but also on the advancements in implant surgery techniques.

CONCLUSION:

From the discussion, one may conclude that the awareness of implants in students is at a desired rate whereas the knowledge about the procedure at below average rate. So, in conclusion implants are the new normal, students should be aware about. They should learn and handle them in the clinical scenario.