Ethical issues in replacing a single tooth with a dental implant

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A general dental practitioner experienced in the placement of dental endosteal implants attends to a 32-year old female patient at her first consultation and treatment planning visit. The patient's oral hygiene was exemplary, her dentition restoration free except for the left central incisor which was non-vital following trauma several years earlier. The tooth had internal resorption, was mobile, had a resorbed apex, was symptomatic, and is by the practitioner's judgement indicated for extraction. The dilemma then was, what were the options for tooth replacement? Treatment options included: a removable partial prosthesis with a single tooth (acrylic, chrome cobalt), fixed multi-tooth partial prosthesis (porcelain, composite, porcelain-metal), fixed single tooth (porcelain, porcelain-metal), or an endosteal implant - supported crown (screw retained, cement retained). The dentist recommended extraction and immediate placement of an implant with a provisional crown. The patient was not comfortable with the idea of having a 'titanium screw' in her jaw and expressed her deep-seated fear of dentists. The cost of this treatment option was also a concern but she was grateful to be able to have the treatment in a single visit and leave without a missing front tooth. At an appointment soon thereafter, the incisor was removed an endosteal implant placed together with an implant provisional tooth in place.

BACKGROUND

The use of dental implants for the prosthetic replacement of missing teeth has become a standard treatment protocol although it may not be the gold standard of treatment.[1,2] This has raised ethical dilemmas regarding whether implants should replace the need to preserve teeth with other restorative options. The option of replacing the tooth with an implant should not be a major factor in deciding whether a tooth should be extracted or not. However, patients want expeditious treatment procedures that are minimally invasive, long-lasting and aesthetic. The increasing success rates of implants, flapless surgery, decreased healing times and decreased treatment time from two or more stage therapies to one-stage implant therapy are some factors that have made implants more acceptable to patients.

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Although newer treatment options are often more patient-friendly, they may not be the most appropriate alternative. Various risk factors might predispose individuals to lower success rates and to a greater hazard for implant failure.[1] Not every site of a missing tooth is indicated for dental implant treatment. Dental implants are not guaranteed to last forever, are not resistant to oral infection and disease, require maintenance, and are not without risk.[3] All these factors should be considered when determining a treatment plan. The surgical placement of endosteal implants is very technique sensitive, especially in areas adjacent to anatomical structures that may be at risk of injury. Treatment planning in the "aesthetic zone" requires meticulous preparation and if not done correctly, may result in poor outcomes. Improperly placed implants or poorly managed alveolar tissues may be both unsightly, unaesthetic, negate the patient's ability to maintain good oral hygiene, and be prone to infection and failure.

ETHICAL CONSIDERATIONS

Before subjecting a patient to any proposed treatment, their tacit agreement is essential. This is both an ethical and a legal requirement. A competent patient will be able to make a choice based on an understanding of the information given to him/her, an appreciation of the diagnosis, the procedure proposed and its consequences, and will be able to reason and weigh up the various treatment options. Consent must be voluntary – that is – the patient must not be manipulated or coerced into consenting. According to the National Health Act of No 61 of 2003, Chapter 2 Section 6 the following information must be given to the patient (User of health care service)[4]:

- Range of diagnostic procedures and treatment options available
- Benefits, risks, costs and consequences associated with each option
- User's right to refuse care and explain implications, risks and obligations of such refusal
- Furthermore, this information must be provided in a language that the patient understands and in a manner that takes into account the patient's literacy level.

The dentist's recommendation is also important, but in advising patients, it is essential that the patient's best interests are paramount. The "best interest" of patients means that professional decisions of proposed treatments and any reasonable alternatives proposed by the dentist must consider the values and personal preferences of the patient. This must be done in a manner that allows the patient to become involved in the decision-making process. Sometimes, patient desires conflict with professional recommendations. Patients must be informed of possible complications, alternative treatments, advantages and disadvantages

and costs of each, and expected outcomes. Together, the risks, benefits, and burdens can be balanced. It is only after such consideration that the "best interests" of patients can be assured. Patients will then make a decision, and either authorise the intervention or decline the treatment. The patient can also withdraw consent at any time.[5]

Due to the fact that implant treatment is often two or three times more expensive than other more traditional options, a discussion about the costs is critical when offering implants as a treatment option. In addition, the stages, timing, potential complications and relative risks and benefits of implant therapy versus other treatment options must be considered. Good dental ethics require the practitioner to make all risks associated with the proposed implant treatment known to the patient, no matter how perceivably rare or insignificant. A thorough consent process is essential and, from a legal perspective, at the end of the consent process the patient must have:[6]

(a) knowledge of the nature and extent of the harm or risk;
(b) an appreciation and understanding of the nature of the harm or risk;
(c) consented to the harm or assumed the risk; and
(d) confirmed consent that is comprehensive (i.e. extends to the entire transaction, inclusive of its consequences).

Dentists are obligated to warn patients of "material risks" inherent in the proposed treatment or procedure. Risks are regarded as "material" if:

(i) a reasonable person in the position of the patient, if warned of the risk, would attach significance to it, and
(ii) the practitioner concerned should be reasonably aware that the patient, if warned of the risk, would attach significance to it.[7]

A practitioner must be knowledgeable to properly inform the patient. Training and education are imperative so as to offer patients safe and effective dental implant treatment. Thereafter, it is an ethical responsibility to determine whether he or she will tackle a potentially complex implant case or refer the patient.

Important questions to ask before embarking on a treatment plan[8]:

- Is the chosen treatment necessary?
- Is the treatment based on good evidence?
- Will the treatment benefit the patient?
- Will the treatment if not done cause the patient any harm?
- Am I treating the patient or my pocket?
- Has the patient given informed consent?

CONCLUDING REMARKS

A thorough and astute knowledge of treatment alternatives is the responsibility of the dentist. There are pragmatic and ethical obstacles that need to be considered when placing dental implants. Pragmatic issues include investing in appropriate equipment and providing a state-of-the-art, accepted surgical environment for implant placement together with staff training to manage the components and complications of implant-related procedures. The management of patients with dental implant prostheses requires on-going evaluation of their oral hygiene, peri-implant tissue health and prosthesis stability.

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