

Practical implantology, part one

IN THE FIRST PART
OF A NEW SERIES,
SIMON ALLUM
DISCUSSES
CONSIDERATIONS TO
BE TAKEN INTO
ACCOUNT BEFORE
OFFERING IMPLANTS
TO PATIENTS



Simon Allum BDS graduated from Guy's Hospital in 1982. He is an experienced lecturer in the use and application of implants in private dental practice. He runs an implantology referral clinic in Darlington, County Durham

There are undoubtedly several well-respected and reliable implant systems available for use in private practice today and from time to time many of us are likely to be visited by company representatives promoting the virtues of their own respective dental implant systems. Whilst the plethora of novel features can be confusing for the inexperienced surgeon, most practitioners will eventually wish to acquire a little more insight into the basic concepts and differences between leading implant systems as the demand for treatment with these devices continues to grow.

For the novice practitioner, one of the first, and apparently most straightforward questions that is often asked is 'what is

the success rate for this implant system?' Ask this question of a company rep and they will be delighted to quote you a figure (probably suggesting success rates well in excess of 95%). However, ask them about one of their rival systems and you may well find a higher failure rate or higher incidence of problems is suggested. To reinforce the message you may be told of an implant practitioner who has switched from using a rival company's implants.

One reason for the variation in quotable success rates is that the question itself can actually be a very complicated one. For example, there may be an issue over what exactly constitutes clinical success - how this success is defined. Implant fixture survival itself

is certainly not enough to ensure that the patient perceives the treatment as having been successful or worthwhile. While success rates themselves can be influenced by a number of patient-specific factors, results from clinical studies are often loosely extrapolated or quoted where they may not be appropriate to the given situation.

Plenty of studies are published each year with clinical outcomes which fall below these very high success rates - sometimes as the result of surgeons 'pushing the envelope' of accepted clinical practice. As a busy referral practitioner in implantology I am often asked to offer treatment to patients whose clinical situation and condition

Figure 1: Unless your practice is paperless, A4 format notes should be considered as A5 envelopes may be bursting at the seams before treatment is completed!





Figure 2: Aseptic technique includes sterile drape packs. A scrubbed and non-scrubbed nurse will be required. Other items required will include a dedicated physio-dispenser unit and surgical suction

falls below the ideal. One common example would be where available bone height dictates the use of a slightly less than ideal fixture length. In such cases a judgement has to be made as to whether to offer treatment which may well turn out to be a complete success. However, the patient should be made aware that this judgement has been taken, especially if there is likely to be a deviation from accepted protocols.

It is my personal experience that success rates quoted by interested parties often deserve close scrutiny, as this can reveal figures derived from papers ‘awaiting publication’,

from papers featuring a very small number of implants, from non-human trials, or simply from studies which have been carried out over inadequately short time frames. Situations can arise where practitioners are in effect carrying out clinical research themselves on their own patients. The financial realities of the modern global dental market mean that this situation does occur, especially in the field of implantology where financial stakes are high and companies are keen to get new products onto the market as soon as possible.

Therefore, the reality of implantology practice is that

practitioners would be foolish to pass on blindly to prospective patients the 99.5% success rate that the friendly rep may casually quote (almost as a blanket covering all clinical situations). Factors such as bone quality, the exact situation of the proposed site (e.g. anterior mandible is considered more favourable than posterior maxilla), available bone volume (anatomical features may limit the length and width of the fixture), the need to carry out simultaneous bone augmentation, the use of a grafted or non-grafted site, the nature of the opposing occlusion, the type of

superstructure proposed (e.g. overdenture or fixed bridge) are all factors that may influence the perceived risk in any given case.

Risk factors may be higher in heavy smokers in patients with uncontrolled periodontal disease, or in patients with impaired healing ability. Other possible complications such as eventual porcelain fracture or the loosening of an abutment screw may also need to be mentioned in the pre-treatment consent form. All these factors add to the eventual equation of risk. It may be possible to reduce risk factors by the selection of an appropriate implant type or by some modification to the patient’s anatomy or behaviour, or via other variables such as the number of fixtures to be used. The need for future monitoring and the likely maintenance

Figure 3: A case referred to the clinic with missing teeth [1 and 3]. The referring practitioner has recently provided posts and crowns on neighbouring teeth



Figure 4: The case is being restored using solid titanium abutments on ITI (Straumann) implants





Figure 5: Snap-on impression copings in place ready for the working impression

requirements for the case must also be discussed before the patient is in a position to consent to the agreed treatment.

About two years ago I was shown a leaflet from another implant practice stating 'Implants may be expensive, but they last a lifetime'. Clearly, such an approach cannot be substantiated and is foolhardy. In contrast, another practitioner recently told me that the oral surgeon to whom he refers prospective implant cases always starts his consultations by saying 'As with anything in dentistry, everything that I do will eventually fail'.

Personally, although that is not a line that I usually use at

my own clinic, it certainly deserves careful consideration and reflection, and may perhaps be the words of a wise man. Certainly, patients do often ask whether implants will last a lifetime and I know that some colleagues reply to this question by first asking the patient how long they intend to live! My own personal reply is often that I am not yet in a position to be able to say how long my own work will last - perhaps some of it will indeed last a lifetime. However, I can certainly tell any prospective patient that very encouraging data on implant survival is available when implants are used in properly assessed and selected

Figure 7: The finished restorations in place with a good aesthetic result. These types of restorations in a motivated patient like this one have an excellent long-term prognosis



Figure 6: Porcelain-to-metal crowns are fabricated to match the neighbouring restorations

cases, and that this data suggests that in some cases a lifetime of successful performance may well be possible. I can supply information about clinical trials that may be relevant to the given situation and I always encourage the patient to find out as much as possible from the internet or other sources before committing to treatment.

As with almost any situation in modern dentistry, one important secret of successful treatment planning and successful implant practice, is knowing when to say 'no' and when to refer on.

RECORD KEEPING

In view of the above, the

paperwork generated by implant cases is considerably more than that incurred during 'conventional' dentistry. When writing patient agreements and completing consent forms, one has to be mindful that this literature may perhaps be referred to in 5, 10 or 15 years time. The record-keeping aspect of implant cases can be tiresome, but has to be comprehensive. Written treatment plans, comprehensive records, consent forms and estimates of the likely costs need to be completed and issued for consideration and signed by the patient where appropriate before any implant work can proceed. Clinical photography can be an extremely useful

Figure 8: The patient is pleased with the result and has become a good advert for implantology and also for our own clinic!





Figure 9: The referring practitioner's pre-treatment solution - a nicely constructed chrome partial denture. Which solution would you prefer if your own teeth were missing?

tool - helpful for the dentist, patient, and the restoring technicians. It also forms part of the medico-legal record of the case. Personally I find that photography is contributory in keeping my own personal interest alight - especially when new procedures are undertaken, or new products or components are used.

WORKING IN THE PRIVATE PRACTICE ENVIRONMENT

The practice environment is undoubtedly a demanding one where the practitioner will stand or fall by the quality of the work completed. In my opinion, local practitioners can be more exposed than regional teams in specialist practices or academic institutions since problems invariably present back as a one-to-one situation. Private practitioners must be particularly careful to follow established protocols where possible. Implant practitioners

also need to be confident that they can meet and satisfy the very high expectations that patients certainly now have - both from functional and aesthetic viewpoints.

Where treatment outcomes fall below that which the patient expects, the situation is likely to be the source of considerable stress for both parties. Unfortunately I have certainly had some experience of colleagues starting out with implants who have found themselves in this difficult position. Such a situation may arise as a result of inadequate treatment planning, poor patient selection, or compromised surgical or prosthetic techniques.

COUNSELLING PATIENTS

When patients attend for an initial consultation, they generally expect the concept of dental implantology to offer a simple,

straightforward and uncomplicated treatment solution to their dental problems. After all, the majority of them are 'only asking for a few replacement teeth'! Happily, this treatment can be relatively straightforward in some cases. However, following counselling, particularly in complex or more anatomically demanding cases, patients often report that they had not realised that there were so many issues involved in appropriate treatment planning considerations. The processes of planning, consultations, and counselling can be very time consuming, and must include assessment and discussion of likely treatment outcomes, discussion of possible difficulties, as well as the appraisal of the likely long-term prognosis for each potential treatment, as mentioned already.

Occasionally, in more

complex cases such as maxillary full arch reconstructions, the patient must be warned that a thorough and proper pre-treatment assessment will be required involving wax try-ins and perhaps CT scanning, and that this process could necessitate a certain degree of financial outlay before it is possible to say whether their treatment expectations can be met.

It is especially important that patients are offered a full range of treatment options. For example, such options often may include working with the established anatomy, or opting for more extensive bone grafting procedures to allow extensive oral reconstructions. Choices may have to be made between removable or fixed prosthetic treatment outcomes. Such an approach helps ensure against the patient declaring (after completion of treatment) that they would have opted for a different - possibly more expensive solution - had they been better informed.

In subsequent articles I will include a comparison of some market-leading implant systems, including practical aspects of their uses. Because of the general nature of this introductory article, appropriate references have been reserved to relate to points that will be covered in more detail during the course of the subsequent articles in this series. 