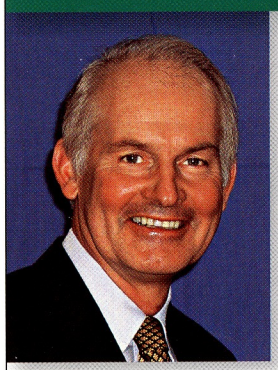

Compiled by
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Minimal intervention DENTISTRY

Dental implants have unquestionably improved the wellbeing of millions of people over the last 30 years.

From providing anchorage in orthodontics to the replacement of a single tooth and onto the complete reconstruction of an entire dentition, dental implants have made a significant contribution to dental science.

The popularity of dental implants amongst the profession is such that not a week goes by where dentists are not invited either by mail or the Internet to attend courses that will improve their skills in this particular facet of dentistry.

Along with the glossy brochures are impressive 'before' and 'after' photographs of the aesthetics that can be achieved with these prostheses and confirmation of the high clinical predictability associated with them. While 'before' and 'after' photographs are impressive the astute observer would like to see photographs of the same prosthesis beyond ten years. While there is more than 30 years of clinical experience with dental implants, long-term clinical photographs do not seem to be part of the promotional literature.

LONG-TERM STATISTICS

So what are the long-term statistics measuring the success of dental implants?

Two recent studies of 10 years and beyond confirm the high success rates in the retention of dental implants. However, when the incidence of peri implantitis and mechanical problems with the prosthetics are factored in, the percentage of implants free of complications was less than 50 per cent in both studies. This may well be less successful than other prosthetic procedures dentists apply to the dentition and is a timely reminder that there is a continual maintenance factor that has to be taken into account with implant use. The rigidity of an implant in a flexing dentition would suggest an increased propensity for porcelain to fracture in this environment. A porcelain crown on a root filled tooth may be less prone to fracturing than an implant supported crown in the same location.

Furthermore, there is evidence of an increased risk to patients who lost teeth from periodontal disease of developing peri implantitis due to the translocation of pathogenic bacteria from periodontal pockets to the tissue surface of the implant.

The ability of ceramists to create superb aesthetics with porcelain is one of the cornerstones of modern dentistry. The strength and wear resistance of ceramic overlaid restorations protect teeth from fracturing and attrition for many years but manage to play havoc with the teeth in the opposing arch. A major cause of amalgam or composite resin restorations fracturing in the posterior dentition is an opposing ceramic crown. Patients who have had porcelain crowns placed on their upper anterior teeth inevitably experience increased wear on their lower incisors and canines that over time can severely affect these teeth. Porcelain facings extending onto the incisal edge on upper incisors and canines are similarly capable of causing extensive damage to opposing teeth.

Provision of a full coronal restoration to a vital tooth increases the probability of that tooth becoming non vital and is further increased by the length of time the crown was placed. With lower incisors, the chance of vitality loss is sufficiently high for some clinicians to electively do root canals prior to tooth preparation.

The fundamentals of restorative dentistry continue to stipulate clinical techniques that cause the loss of more tooth structure than the disease processes against which they are aimed. This over preparation results in the premature destruction of the dentition necessitating the high end care that forms the basis of so many dental seminars.

Minimal intervention dentistry is not about drilling smaller cavities or conservative crown preparations; but the re evaluation of treatment modalities based on the pharmacological management of dental disease rather than the current amputation model that predisposes to the premature breakdown of the dentition.

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