The perio-implant interface

Periodontal therapy not only promotes good oral health, it is also the cornerstone for excellent cosmetic dentistry, says Dr Jose Zurdo

When deciding how to deal with a periodontally compromised tooth in a clinical situation, there are a number of factors to take into consideration. These not only include the prognosis of both the affected tooth and adjacent teeth, but also the periodontal stability of the rest of the mouth, all of which play an important factor in deciding whether to treat the tooth or to go ahead with the placement of implants. Other vital factors to remember are the patient's bone dimensions, their financial restrictions, and any cosmetic implications of treatment.

Early treatment

It is widely accepted among dentists that teeth affected by periodontal disease are unreliable in the long-term, meaning that if implant therapy is a consideration, it should be carried out as early as possible.

Implant therapy is regarded as a safe and reliable method in the treatment of complete and partial endentulism, however, it is also associated with technical and/or biological complications, such as peri-implantitis. This significant and not infrequent complication can result in bone and implant loss, and seems to be more prevalent in periodontally compromised patients.

The following article presents a case that presented with extremely severe generalised chronic periodontal disease that clearly needed restorative treatment and periodontal management. The case has been followed for eight years, which is a reasonable time to evaluate its long-term outcomes.

The Case

This patient was a 47-year-old male in good general health. He complained of tooth mobility (particularly tooth 11), which had triggered his visit to the dentist. As a temporary measure, his dentist had splinted the tooth (Fig 1). Upon examination, dramatic bone loss could be seen (Fig 2) with deep pockets and bleeding on probing (BOP) in all areas. No previous periodontal treatment was reported other than occasional ‘scaling and polishing’, and his oral hygiene was fair.
After lengthy discussions about the patient’s prognosis and treatment options, his wish to avoid removable prosthesis was made quite clear, although his cosmetic demands were low. Extensive implant treatment was beyond the patient’s financial means, but he would consider short arch dentition.

A full clinical examination was carried out to evaluate the extent and severity of the disease (pockets, bleeding, mobility, etc). Initial periodontal therapy included the removal of the ‘hopeless’ remaining molars and tooth 11 (root resection). All remaining single-rooted teeth, regarded initially as having a ‘questionable’ prognosis, were subject to a course of non-surgical periodontal therapy.

Despite the impressive radiographic appearance of dramatically advanced periodontal disease, the general mobility following initial therapy was degree 1 and all teeth were functionally stable. Generally, bleeding and pockets improved substantially, however a number of sites in the lower jaw still presented deep pockets that responded well to periodontal surgeries (Fig 5). Once full periodontal stability was obtained (absence of pockets >4mm, negligible presence of BOP, good OH and physiological mobility), a strict maintenance programme was designed to prevent recurrence of the disease (Fig 4 & 5).

Subsequently, an implant was installed at 11 with simultaneous connective tissue graft to improve the quality of the soft tissue seal (Fig 6 & 7). The implant was restored three months later with a cemented porcelain-bonded crown over a cast-to-abutment (Fig 8). The patient has been followed for eight years without any significant change to his periodontal and peri-implant condition (Fig 9). The only relevant observation was the deterioration of the conventional fillings present in the anterior region that were getting old and needed replacement.

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Points for discussion
This case illustrates the potential of structured periodontal therapy (conventional non-surgical therapy plus localised corrective surgical treatment and long-term care) to change the prognosis of very compromised teeth in a highly motivated patient.

The prognosis of teeth is not only dependent on the amount of bone that has been lost – and more importantly, what is left – but also the ability to prevent further bone loss. Both the patient’s wishes and local or anatomical factors will influence the dentist’s chances of controlling the disease.

Despite this, it is very well documented that in the majority of cases periodontal therapy can be quite predictable. The feeling of inevitability that spreads among patients, and the sense that the battle has already been lost, is in many cases, unjustified.

Although often overlooked, periodontal tissues cannot be ignored. As patients become more knowledgeable and discerning, it is increasingly important to update our skills in this area of treatment and provide a first class service for all.

About the author
José Zurdo has extensive experience in general and specialist practice. After graduating in Medicine (Bilbao, 1983) and General Dentistry (Barcelona, 1986) he completed a Masters in Clinical Periodontology (NYCD, 1985) and a Preceptorship in Periodontics (Houston, 1989) and an MSc in Periodontology at the University of Gothenburg (2002) with the approval of the European Federation of Periodontology. The Swedish Board of Health and Welfare recognised him as a Specialist in Clinical Periodontology in 2002. José currently runs popular, hands-on periodontal courses and study groups for all dentists interested in extending their skills in this area. He is running courses at the DARE training centre in Manchester. Please contact Suzanne@daredental.com or call 0845 936 7500 for more information.

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