products to delegates on their en-

The company started as D2D Endo three years ago after

The formula seems to have worked well for D2D Endo, and

There are so many people

Introducing the Laser-Lok® 3.0 implant

Laser-Lok 3.0 is the first 3mm implant that incorporates Laser-Lok technology to create a biologic seal and maintain crestal bone on the implant collar. Designed specifically for limited spaces in the aesthetic zone, the Laser-Lok 3.0 comes with a broad array of prosthetic options making it the perfect choice for high profile cases.

• Two-piece 3mm design offers restorative flexibility in narrow spaces.
• 3mm threadform shown to be effective when immediately loaded.
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Recently was able to add implantology to my ever growing list of dental skills after a very insightful day at the UK headquarters of Straumann.

The day was entitled ‘An insight into the world’s leading dental implant company’ and it gave the dental press an chance to get to know the team at Straumann, find out what the company does beyond its implant offerings and hear about its association with the ITI (International Team for Implantology). It also allowed us to have a chance to place an implant for ourselves, though fortunately our patients were nothing more than a small plastic disc.

The event began with a welcome from head of Marketing Vanessa Elwill. Following her was managing director of Straumann UK Stephen Booth. He gave a background to the company, from its beginnings as a family-owned research institute in 1954, through to the present where it is claimed as a global leader in replacement, restorative and regenerative dentistry.

Straumann UK has established itself at its offices in Crawley as not only a base for UK operations but also a first-class training facility for internal and external clients. In the last year there have been 75 courses at the centre and 45 external courses, with more than 1500 delegates.

Stephen also pointed out that Straumann are more than just implants. The product portfolio covers solutions for preserving, restoring and replacing teeth, including: Emdogain – regeneration product in period; Bone Ceramic – synthetic bone replacement; CAD/CAM – in partnership with Ivoclar Vivadent, this includes the Cadent digital scanner; Digital implant systems and guided surgery; Implant surface technology – Roxolid, SLA Active.

Following Stephen was John Aiken, Straumann CAD/CAM Sales Manager. John gave further insight into the benefits to labs clinicians and patients of using digital scanning and CAD/CAM in the design and production of appliances such as crowns, bridges and onlays.

Then it was the turn of Phil Freiberger, clinician and Chairman UK & Ireland ITI Section. He explained who the ITI is as a global association in implant dentistry aiming to promote research, development and education in its field.

It currently boasts 7,500 members and 700 Fellows in its ranks. Education and research is key to the ITI, with study clubs, courses such as the ones run at Straumann and Scholarship programme at the Eastman.

Research-wise it is critical, with investment of CHF1.7m in 2009 alone into 60 different projects at 22 different institutes worldwide. Since 1988 283 research projects have been funded to the tune of CHF52.2m.

After the presentation it was time to play dentist! A few hardy souls sat down under the watchful gaze of the Straumann team and Phil. We were taken through the process of drilling the implant socket, having to be careful not to drill too far. My implant is now pride of place on my desk in the office.

Thanks to Straumann for a wonderful and informative day at their offices, I look forward to the next time!
Aesthetic challenge

Thorough examination and execution of treatment are key to carrying out immediate tooth replacement Dr Riz Syed explains

In our clinics, we often have to deal with patients who require a single implant to replace a failing tooth. Our aim should always be aesthetically driven, in that we should always strive to achieve the most stable aesthetic outcome.

In the aesthetic anterior zone, we are often faced with an aesthetic challenge. Do we extract a tooth and delay the placement of an implant allowing the site to heal before implant placement and try to rebuild any bone and soft tissue loss following the healing process?

Gingival support

The main reason for placing an implant at the same time as extracting the tooth and possibly placing a provisional restoration is to support and maintain the gingival architecture of the failing tooth.

In order for us to place implants in immediate extraction sites, certain protocols have to be followed to achieve a successful outcome:

- Careful patient assessment should be undertaken both clinically and radiographically
- No active underlying pathology
- Gingival form: look at the whether the form is flat or scalloped and determine the marginal position relative the adjacent teeth. This is significant in deciding the degree of marginal discrepancy that may occur
- Gingival biotype: is the biotype thick or thin? We can often determine the biotype by probing the buccal tissue and seeing how much of the probe is visible through the tissue. The thinner the tissue, the higher the chances of soft-tissue recession.

Carrying out extraction

The tooth has to be extracted carefully using periodontal in order to avoid unnecessary trauma to the bone. The socket is then cleaned thoroughly and probed to determine the length of the socket from the soft tissue or bone margin. The ideal option would be to place an implant just a few millimetres longer than the socket to engage in the alveolar bone to achieve primary stability. Pressure should be avoided on adjacent interdental bone to maintain the papilla between the implant and tooth.

For incisal teeth, the mid-palatal socket is an ideal location for the initial twist drill. The final implant should therefore be placed in more palatal position. The remaining gap between the implant and the buccal plate, if it is less than 1mm, can be filled in with bone. If, however, the gap is larger, bone material should be used to prevent the collapse of the buccal bone and soft tissue.

The ideal depth of the implant in the majority of cases is three mm below the soft-tissue margin to ensure the biological width is not encroached. In areas where there is a bony wall defect, implants can still be placed at the same time as extraction and guided bone regeneration can also be carried out the same time. In V-shaped defects, there is often minimal recession compared to U-shaped defects.

Placing an immediate provisional without encroaching on the tissue with a negative contour will help to support the tissues. Although immediate implant placements can result in a successful outcome, there is slightly higher risk of failure. Thorough examination and surgical execution are vital to ensure success.
Peri-implantitis: definition, etiology and treatment

By Vavalekas Michail of the Ashman Department of Periodontology and Implant Dentistry at New York University College of Dentistry

Peri-implantitis is an inflammatory process affecting the soft and hard tissues resulting in rapid loss of supporting bone, often associated with bleeding and suppuration. The etiopathogenesis of peri-implantitis is complex and is related to a variety of factors. The peri-implant environment and soft tissue-implant interface has a major impact on the progression of peri-implantitis.

Patient-related factors include: 1) systemic diseases (for example, diabetes, osteoporosis), 2) social factors such as adequate oral hygiene, smoking, drug abuse, 3) parafunctional habits (bruxism) 4) and previous dental history of periodontal disease. In addition to the above etiologies, intragenic factors can also play a significant role in the development of peri-implantitis.

Although restorations of endosseous implants have demonstrated a very high survival rate, one study suggested that over a five-year period, 0 to 14.4 per cent of dental implants demonstrated peri-implant inflammatory reactions associated with crestal bone loss.

The etiology of failure has classically been related to infection. Bleeding, suppuration, pain, and plaque accumulation along with progressive bone loss was defined as peri-implantitis. It was initially thought that peri-implantitis was caused by bacteria, thus initial treatment was focused on bacterial removal and surface decontamination of implants. Currently, different methods of implant decontamination have been proposed for ailing implant surfaces.

The treatment modalities are: 1) administration of systemic antibiotics, 2) mechanical debridement with or without chlorhexidine oral rinses or antibiotics 3) mechanical debridement combined with LASEB decontamination, 4) debridement combined with a flap access and more recently, 5) debridement was combined with guided bone regeneration (GBR) for repairing of osseous defects and GRR has limited predictability and some case series have demonstrated limited bone fill after GBR procedures. There is insufficient evidence to support any one of the aforementioned treatment strategies for peri-implantitis.

Therefore, different treatment modalities for peri-implantitis will be compared from previously published studies.

Points for discussion

One study demonstrated the importance of bacterial plaque accumulation in the development of inflammation around implants (peri-implantitis) while another showed that, if this condition is left untreated and the surface is not decontaminated, it will lead to peri-implant pocketing, alveolar bone loss, and eventually to implant failure. Because there are biologic differences between teeth and implants, the advancement of infection around implants is also different than natural teeth.

The inflammatory cell infiltration around implants was reported to be larger and extend more apical when compared to a corresponding lesion in the gingival tissue around natural teeth. In addition, the tissues around implants seem to be unable to resist the plaque associated infection and antibiotics may be necessary for the treatment of peri-implantitis.

Bacteria on the implant surface are the target in treating infections around implants and traditional therapeutic approaches have been directed towards implant surface decontamination. Systemic administration of antibiotics were also used in the treatment of peri-implantitis with an immediate reduction of inflammation, bone re-growth and gradual reduction of pocket depth, but a three-month recurrence of peri-implantitis was observed due to bacterial re-colonization of the implant surface.

To date, there is no reliable evidence that suggests which intervention (chemical agents, mechanical debridement, surgical procedures, lasers or a combination of Guided Bone Regeneration (GBR) with the former techniques) is the most effective for treating peri-implantitis.

Some of the treatment modalities suggested for peri-implantitis are: 1) sub-mucosal mechanical debridement and antimicrobial minocycline microspheres (Arestin), 2) mechanical ultrasound debridement without antibiotics, 3) laser ablation (Er:YAG) with mechanical debridement, chlorhexidine, with and without open flap surgery, 4) antimicrobial therapy with open flap debridement, 5) access flap surgery and bone substitute or bone graft.

Furthermore, it was compared the combination of oral hygiene instructions, mechanical debridement and topical application of minocycline microspheres (Arestin) in peri-implant lesions (with bone loss corresponding to no more than three implant threads) to the combination of oral hygiene instructions, mechanical debridement and one per cent chlorhexidine gel application.

The results obtained after a follow-up period of 12 months on sub-mucosal mechanical debridement and antimicrobial minocycline spheres showed that only a