Mr W was referred to the Kent Implant Studio wishing to replace his upper left central incisor. The patient was wearing a partial denture which he was unhappy with, and did not like the idea of a conventional bridge. The patient was medically fit, healthy and a non-smoker.

After discussions with the patient and the referring dentist, it was decided the tooth would be replaced with an implant supported crown.

There was a buccal defect apparent. The history of the tooth was a trauma incident (cricket bat) which led to the tooth fracturing and needing endodontic treatment around 30 years ago. The tooth subsequently needed an apicectomy. The apicected site was apparent with a soft tissue area apical of the previous tooth. There was also a buccal defect present 12mm from the edge of the ridge. Ridge Mapping clearly indicated a bony defect of at least 12mm in height. Soft tissue analysis showed 8mm of defect at the edge of the ridge narrowing to the shape of the previous tooth. There seemed to be a height defect buccally compared to palatally of around 2mm. These measurements were confirmed during the reflection of the flap during surgery. If an increase in width was needed, ridge widening could be considered, however, the defect on ridge mapping measures 1mm at crestal level, a difficult procedure considering this case. There also seemed to be a buccal height defect, which cannot be corrected with ridge widening.

Therefore, augmentation was the proposed option. This could be either guided tissue regeneration with the use of bovine/irradiated bone or grafting procedures using intra-oral donor sites. The defect was of height and width, and a J shaped bone graft would be of more use: therefore the ideal site for a donor would be the Ramus. As the patient was missing both his wisdom teeth, either side could be considered. As the ID canal was more clearly visible on the OPG and identifiable throughout on the right hand side, the right Ramus was the more ideal site.

A ramus graft was obtained from the right ramus as planned and positioned in the upper left central incisor area. Three months were allowed for bone healing, and subsequently an implant length of 14mm and width 4.5mm (Ankylos B14).

Primary stage impressions were obtained (an impression at the stage of implant placement). six months were allowed for implant integration, and subsequently the implant was exposed using a small ‘H’ shaped incision, with the incision point more palatally, thus allowing a buking effect of the gingivae buccally.

The already chosen abutment with the correct angle (22.5 degrees) was fitted and an already constructed temporary acrylic crown was fitted. The crown was adjusted at the gingival margins so to define the final contouring of the gingivae. The final restoration was fitted after three weeks of gingival healing.

The patient was delighted with the end result, and was surprised the treatment was not painful and that he was able to fully function the next day after all the stages. The patient was returned to the referring dentist for routine care.

The buccal defect is apparent in the clinical photos. An implant without bone grafting would produce an incorrect emergence profile leading to an aesthetic compromise.

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Aesthetic Zone needing Augmentation

Dr Shushil Dattani presents an interesting case

‘The patient was delighted with the end result, and was surprised the treatment was not painful and that he was able to fully function the next day after all the stages’

Dr Shushil Dattani

About the author

BDS, MFDS (UK), DipImpl Dent RCS (Eng)

Principal of Kent Implant Studio and Kent Smile Studio in Maidstone, Shushil qualified from the Royal London in 2000, after which he completed a two-year programme and membership to the Faculty of General Dental Practice at the Royal College of Surgeons. He is accredited with a Diploma in Implant Dentistry at the Royal College of Surgeons of England and is a member of the Association of Dental Implantologists, the American Academy of Cosmetic Dentists and regularly trains and attends courses around the world including the pioneering American and British Cosmetic Dentists. For more information or to refer to the Kent Implant Studio please call 01622 754 062