The importance of groundwork

The key to any successful implant treatment lies in its planning and execution. Dr Riz Syed explains

The implant surgeon may feel a case is successful based on the criteria, but it can be seen as a failure if all of the patient’s desires are not fulfilled. It is therefore important during the initial consultation to listen to the patient and understand what he or she is hoping to achieve. Following careful clinical and radiographic evaluation, the range of options should be presented and a treatment decided upon that best suits both clinician and patient. Risks and complications can be listed and explained in a comprehensive consent form tailor-made for that patient.

Periodontal status must be measured and treated if necessary before beginning any sort of implant therapy. A clear interaction with either the hygienist or the periodontist is crucial for long-term success.

Any active decay should be noted and treated. Also check for occlusal disharmonies and decide whether to use a conformative or a re-organised approach.

The type of soft tissue around the proposed site should be noted, as this will have a significant effect on the restorative and long-term success. Smile lines, current position and colour of the teeth are all noted to determine the final desired result.

The medical history

A detailed medical history will enable assessment of any risk involved during or after the surgery. Interaction with the patient’s physician will help deal with patients with complicated medical histories, including those who are taking anticoagulants, have had major surgery or cancer treatment. These patients are suitable for surgery providing that set protocols are followed.

Current medication, such as bisphosphonates, can also affect the outcome of surgery. This is not a contraindication provided set guidelines are followed.

Periapical radiographs

Simple periapical images help to assess bone level, periapical pathology, caries and current restorative situation of teeth. This assists in deciding on prognosis and treatment for each tooth.

Calibrated ball bearings are useful to measure the height of

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CT scans are also very useful in exploring the sinus before augmentation procedures. In a significant number of cases, maxillary sinuses have a septum that can lead to complications. Knowledge of this can help surgeons modify the design of the window needed to lift the floor of the sinus.

For further information, call 01095 450 650, email info.uk@nobelbiocare.com or visit www.nobelbiocare.com.

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### Pan-oral radiographs

Pan-oral radiographs are very useful to view overall condition of current dentition and bone level, vital structures or the level and size of maxillary sinuses.

### Ridge mapping

Often, ridge width will appear sufficient for implant placements, but once a flap is raised, the true width of the bone is very narrow. This is due to the thick soft tissue above the bone ridge.

The surgeon is therefore left with the issue of grafting the narrow ridge and delaying implant placement as well as explaining extra cost and time to the patient.

During a full consultation, the patient can be anaesthetised and bone callipers used to give an accurate ridge measurement. Or, study models can be taken and a plastic suck-down guide with multiple holes across the ridge produced by the lab. The patient is anaesthetised and a probe used to measure the depth of each hole from the soft tissue to the bone. These measurements are returned to the lab where a model is produced showing the exact dimensions of bone on that selected area. A guide can be produced from this model to help with implant placement.

### CT scan

CT scans are becoming increasingly popular in helping with bone diagnosis and placement of single and multiple implants. The dicom files received from a scanning centre give the most accurate measurement. File conversion software is available, allowing users to reconstruct the image as a 3D model of the desired ridge.

With Nobel Biocare’s successful NobelProcera software, the surgeon can plan and place implants with outstanding accuracy and create a surgical stent. Prostheses can be fabricated based on where the implants will be placed. The stent is placed into the mouth and implants can then be placed and loaded during the same visit.

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### About the author

**Dr Riz Syed**

qualified at the Royal London Hospital in 1999 and runs a referral clinic in Islington and Walton-on-Thames, and was one of the first surgeons in the country to use NobelGuide. He is a mentor for Nobel Biocare, helping to train UK implant surgeons. Regularly consulted for complex treatment planning cases, Dr Syed lectures on guided implant surgery. He is a member of the Association of Dental Implantology and Fellow of the Royal Society of Medicine. His practice includes sinus grafting, surgical crown lengthening and hard and soft tissue grafting, and has been awarded the Clinic of Excellence in Implant Dentistry. To contact Dr Syed, email rizsyed@hotmail.co.uk, call 01923 223479 (Mulberry Dental Care) or 020 7226 9797 (AG Dentistry).