Planning for success

Mistakes can be made when carrying out guided surgery, but they can be easily be avoided if you plan accurately, insists Dr Riz Syed

Guided surgery is an aspect of implant surgery that has gained popularity over the last 10 years, allowing surgeons to plan implant placements with a high degree of accuracy. The idea behind guided surgery is to perform a complete evaluation of the patient, from the surgical to the restorative point of view, and then to translate this information into a surgical guide for optimal implant placements.

In 2005, the Food and Drug Administration (FDA) approved a guided system from Nobel Biocare known as NobelGuide. Having used NobelGuide since 2005, I have enjoyed a high success rate. I have however, come across problems based solely on the inaccurate planning, which has inevitably led to complications.

Avoiding common pitfalls

The planning involves many stages before the surgery and each stage is vital to ensure success.

The first stage occurs during the consultation where the patient is carefully assessed. Their desires and final outcome have to be taken into account along with the patient’s medical history.

If the patient is wearing a prosthesis, it is crucial to check if the patient is happy with the position and look of the teeth. The fitting surface, vertical dimension and lip support should all be assessed.

It is then important to decide if the patient’s prosthesis is to be used as a guide for the CT scanning. The alternative is to produce a new model. It is vitaly important to ensure the fit surface is accurate and verified before sending the patient for a scan. Occlusal index must be worn during the first scan with the radiographic guide in place to ensure this does not move during the scanning procedure.

Words of warning

One problem I have seen on many occasions is the use of radio opaque relining materials. These materials show up on the scan and can interfere with the bony ridge and it is very difficult to assess the crestal position. If a new stent is made for the scan, radio opaque materials should not be used.

The second problem in planning arises when the Gutta Percha markers are not placed in the correct position. For the software to match the prosthesis to the CT of the patient, at least six markers are needed on different planes away from the occlusal surface. Each marker should be at least 1.5mm in diameter x 1mm deep. Some scanning centres are happy to place the gap markers into the stent or denture. Having a good relationship and communication with the scanning centre is important.

Know your software. The guided software has many different functions available to the user and it is very important to familiarise yourself with using demo cases before you plan a live case.

Once the scan has been sent back and reconstructed on the Procera software, the implant planning phase begins. This is where the Nobel Biocare software comes into its own. The patient’s anatomy can be assessed with a high degree of accuracy, allowing the surgeon to view vital structures including the mental and inferior dental nerve, maxillary and nasal sinus. Implants can then be placed with great precision.

Each implant placed has a yellow halo of two mm surrounding
Finding your vocation

Although it can be a time fraught with tension, it’s also a time for you to decide exactly where you want to head, says Sarah Armstrong, who offers some essential, yet calming advice.

The time of year is approaching where final year dental students across the country are beginning the application process for their Vocation Training (VT) positions commencing in August 2009.

The VT application process can be stressful business. For the first time since you all met back in first year, you and your friends will be competing against each other for the same jobs and tempting possibilities can get a little fraught, especially when you are often competing against not only friends but housemates too!

Final years have an amazing knack of knocking each other up into a frenzy and the VT application process is certainly no exception. Every year rumours fly about candidates who have jobs before the release date for VT positions or practices who are interviewing weeks in advance. The majority of the time these are false, so try and ignore these as best you can and concentrate on your own application.

Get in early

Prepare your CV/application form early. Even if the deadline is months in advance, it’s best to get cracking now as once the deadline is imminent, you will be caught up other pressing matters – that small matter of revision for finals!

Your VT application is not just a one-way process; this is also your chance to assess where you want to go to. Are you interested in working in a large or small practice? Are you interested in a particular dental specialty? Do you want to work in a particular position, it can also be placed in the best restorative position.

Always ensure the guide rings in the stent are not sitting on the fit surface as this affects the seating of the stent during surgery. Verify the fitting of the stent once it’s arrived and when seated correctly, blanching of the tissue should occur.

These implants could then be loaded immediately after placement as in the immediate-loading concept or as a two-stage technique.

For further information, call 01895 450 650, email info.uk@noblebioscare.com or visit www.noblebioscare.com.

About the author

Dr Riz Syed qualified from Newcas
tle University in 2008 and is currently working as a vocational dental practitioner in Brampton, Cumbria. He is a mentor for Nobel Biocare, helping to train UK implant surgeons. Regularly consulted for complex treatment planning cases, Dr Syed has also gained implant surgery. He is a member of the Association of Dental Implantologists, the Interna
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