My first 100 days with TRIOS
A short interview with dentist Dr Wendy AuClair Clark, USA

By Dr Juan Blanco-Carrión, Spain

A demanding procedure
Flapless surgery and why it shouldn’t be considered routine yet

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Whether regarding the market’s hottest smartphone or something bigger, most owners of new technology will start out by critically scrutinising their new piece of equipment. Dentists who have just acquired the TRIOS Digital Impression solution from 3Shape (Booth S13) are no exception. Some say that the first 100 days is the perfect span of time needed in order to judge a sophisticated product, since it is long enough to form a qualified opinion about its functionality, usability, and clinical results. Prosthodontist Dr Wendy AuClair Clark from Atlanta in the US speaks about her initial experiences.

todayinternational: Dr AuClair Clark, how did you become involved with the TRIOS technology in the first place?
Dr Wendy AuClair Clark: Our practice has been a leader in smile design for more than three decades. When the decision came to implement the 3Shape TRIOS into the practice, I was very excited to be using a new intra-oral scanner. I had previous experiences using other digital impression scanners in the past and was eager to learn how TRIOS would differ.

How was your initial experiences with the TRIOS solution?
Both the setup and the training were very easy and simple processes. The system expert got us started. He did the installation on the first day, which was setting it up with our network and setting up the connection with our lab. The second day was for training. We worked with TRIOS interface, turning it on, adding users, checking cases and scanning methods. The expert then followed up with us a month later, which worked perfectly.

What kinds of cases are you now using TRIOS for?
Originally I was using it primarily for crowns, including screw retained. Now, I am mainly doing implant cases (milled abut- ments). Being able to use the same workflow for the scanning has made the transition into this new area seamless.

How do you like using TRIOS?
I have experience using other scanners but using TRIOS has been refreshing. I appreciate that the scanning is continuous, that I just have to click one button and start scanning, which makes it quick. I also like that the colours of the scans are so natural, and that the tip is heated. This helps reduce the amount of air I have to blow into the patient’s mouth—which is crucial when it comes to patient sensitivity. I actually have had a patient for a few years now who has dreaded taking traditional impressions because of his gag reflex. I have even had difficulty scanning him with other scanners before, because I could not stop the scanning. However, with TRIOS I can stop, let the patient relax, and then re-start the scan when he is ready. He has definitely become a big fan of TRIOS.

Has the use of TRIOS also improved communication with your lab?
I can keep in touch with my labs much better and follow up on my cases faster, which has reduced the total time for treatment. I appreciated being able to get in touch with them when they were having trouble reading the margin line. I was able to easily reset the margin line, and the crown came back in perfect form. I didn’t have this option with any of my previous scanners.

Thank you very much for the interview.

A demanding procedure
Flapless surgery and why it shouldn’t be considered routine yet

To date, the placement of dental implants is considered a routine method in the rehabilitation of partially and completely edentulous patients. Initially, dental implants were installed using a surgical protocol, which involved the elevation of a mucoperiosteal flap. However, it is known from periodontal surgery that any flap reflection always results in bone resorption and changes in the crestal bone level. In view of this problem, a flapless surgical approach has been recommended.

With this technique, three different approaches have been described: tissue punch (with shorter punch diameter than the diameter of the implant), circumferential incision using a surgical blade, and direct drilling. In addition, clinicians will address two clinical scenarios when using flapless surgery: healed sites and fresh extraction sockets.

From a biological point of view, preclinical “in vivo” research (short-term data) concluded that with flapless surgery, one can obtain a shorter junction epithelium, as well as less marginal bone loss, gingival inflammation and buccal recession. These results have not been confirmed in clinical long-term studies. There are no statistical differences between flapless and flap surgery in terms of survival rate, marginal bone loss, probing depth, keratinized mucosa and papillary index, meaning that there is probably no biological benefit with the flapless approach.

However, flapless surgery seems to have a positive impact on patient-centered variables such as pain, postoperative swelling, medication, morbidity and patient comfort.

The flapless technique is not exempt from complications like the risk for more bone perforations and low implant stability. The available data demonstrate that flapless surgery, initially recommended for novice surgeons, actually requires more experience and pre-surgical planning than had originally been assumed. Furthermore, this technique is often more demanding than the conventional surgical approach. Therefore, the use of flapless implant placement as a routine procedure in daily practice is not recommended.

Since the flapless technique is not supported with enough evidence for preserving marginal bone, it may have no long-term aesthetic benefits and should not be recommended for cases that aim to achieve highly aesthetic outcomes. Instead, adequate keratinized mucosa and alveolar bone volume (flat crest and lack of concavities) should be expected.

Dr Juan Blanco-Carrión is a Professor of Periodontology at the University of Santiago de Compostela’s School of Medicine and Dentistry in Santiago de Compostela in Spain. Today, he will be presenting a paper titled “Flapless surgery, flapless surgery” as part of the EAO 2014 scientific programme.