

# Why postgraduate education?

## We look at the pros and cons of postgraduate education with a case example from **Anwara Chambers**

An undergraduate is someone who has not graduated from university, while a postgraduate is someone who is continuing his education after he has obtained a basic dental degree (BDA). Postgraduate degrees include master's degrees and doctorate degrees (PhD).

That's the dictionary definition. But in real life the difference between a postgraduate degree or specialism and a regular BDS is noticeable today and will be huge tomorrow.

NHS dentistry is moving towards a system like that currently employed in the US. Basic treatment is carried out by other dental professionals, while the more complex treatment is done by the dentist. Any endodontics, periodontics, orthodontics, implant dentistry is referred out as well as other specialist work. Normally in the US the dentist is a specialist with postgraduate education and qualifications in one of the specialisms. Then not all specialist treatment needs to be referred away from the practice.

NHS England has already expressed a desire for the easier treatments to be done by hygienists and dental therapists. The cost saving to the NHS would be significant in the future.

## Future proofing

And speaking about the future, a dentist considering the future really should seriously consider post graduate education in order to future-proof their dental career and potential income.

We have a case study here from Anwara Chambers who is training in implant dentistry and reflects on his first implant placement at the multi-system certificate course mentee school. But look at the mentoring support afforded this beginner in implant dentistry!

## Under Cemal Ucer

I enrolled on the Multi System Implantology Certificate Course, in Manchester in October 2015. This is a long established postgraduate teaching programme that has been running for more than 20 years under the direction of Professor Cemal Ucer.

The course was run one day a month, over 12 monthly sessions, and was a fully structured programme providing academic learning by a mix of expert lectures and clinical 'hands on' training under Prof Ucer's supervision to fulfil the requirements of the FGDP/GDC Training Standards in Implant Dentistry (TSID, 2012, 2016). On completing of the basic academic learning, practical training on raising flaps, suturing, atraumatic extractions, socket augmentation, the GBR technique and soft tissue grafts was undertaken using pigs' heads and the implant placement surgery was practised initially on plastic jaws utilising different types of implant system to complete the preclinical training requirements of this course. Cemal is a respected authority in dental implant education and a co-author of the training standards in the UK and Europe so, as expected, the course he runs is fully structured to achieve all the requirements and learning outcomes necessary for the attainment of clinical competence in this vast field of dentistry.

Having not had any previous experience of implant systems, the only ones I had heard of were Straumann and Nobel. I now know that there are many different systems on the market with varying levels of long term documentation, research and development and it is a matter of personal choice for each individual practitioner to look into the systems and decide what is suitable for their particular practice. Cemal insists that a process of critical appraisal should be performed when selecting a system that can be fully trusted and relied upon especially for the beginners. When starting in this field the practitioner needs to have confidence on every aspect of the hardware. Ongoing support from the implant company is also another requirement.

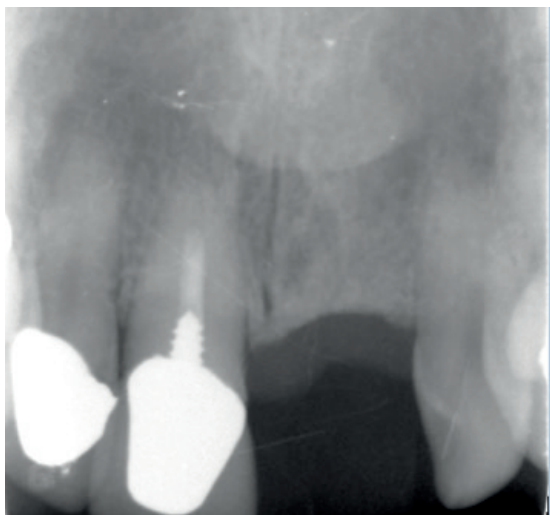
## Megagen was chosen

I decided that of the three systems we trialled, the Megagen system would be most suitable for use in my practice because it appeared to be more user-friendly, due to there being a reduced amount of restorative components. Another thing in its favour was the reduced initial set up costs.

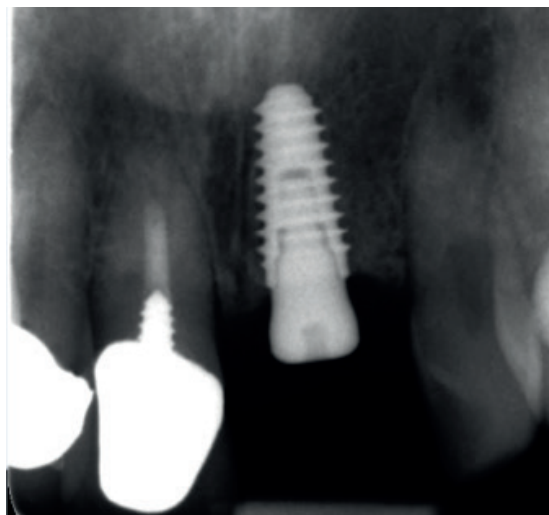
After the completion of the academic part of the course we were given the option to treat a patient either provided by the Mentee School at ICE Postgraduate Institute and Hospital or bring a patient of our own to treat under supervision of a university accredited mentor. I had a patient in mind, who had recently had an extraction of an upper left central incisor, and who was keen to explore the possibility of an implant to restore the space; but I was concerned about the aesthetic considerations that apply when replacing an implant in the aesthetic zone (AZ). (Figure 1)

Cemal had advised me to select a potential implant site that was not in the AZ due to the potential difficulties and high demands when operating in this area. However, full case assessment I had carried out under Cemal's close supervision revealed that this case was not a complicated one for various reasons; given her older age, dental aesthetics was not the most important factor for this patient's requirement. Full surgical and restorative risk assessment revealed that she did not have a high smile line. The main objective for the patient was improved function and comfort - she was finding it difficult to cope with a one-tooth denture. Her options were limited, due to her adjacent central incisor having post-crown with a guarded prognosis which would not have been an ideal abutment for a bridge. She had a good soft tissue biotype.

Cemal had asked me to write up a dental report and a treatment plan based on my full assessment including radiographs. To accomplish this, the patient was booked for further diagnostic tests to assess fully her intra and extraoral ▶



**Figure 1: Periapical taken prior to implant placement. UR1 was clinically asymptomatic but highly compromised with no evidence of periapical seal**



**Figure 2: Periapical taken two weeks after implant placement**



**Figure 3: Cover screw prior to restoration. 3mm cover screw is at gingival level**



**Figure 4: After cover screw removed to show gingival contour. The shoulder of the implant is 3 mm below the gingiva to allow for a health biological width**

primary stability that can be achieved with this type of implant, it was not necessary to bury it with a flat cover screw under the periosteum. Hence a 3mm healing abutment was fitted. This removes the need to do a full surgical exposure procedure prior to the restorative treatment. I felt that the suturing went well due to the fact that we had practised different techniques during the pig's head sessions. I gave the patient post-operative instructions she was discharged and given a date for her review appointment.

I reviewed her at my own practice 10 days later, expecting her to inform me that she had suffered with after pain following the surgical procedure. However, this was not the case, and she was happy to inform me that she had gone out that evening and had experienced very little discomfort, which was a pleasant surprise for me. On examination, the site was healing fine (Figure 2) and I made arrangements to restore the implant site eight weeks after the placement surgery.

We had been given instructions on how to restore implants during the course and had practiced it on models. Janice Pimlott from Megagen has spent further time with me to re-explain the restorative system and she was happy to be present on the day to ensure things went smoothly.



**Figure 5: UL1 implant restoration. The patient was given the option of having the adjacent UR1 replaced to improve aesthetics but the patient was reluctant to disturb this tooth**

condition.

A small field of view (40x40) CBCT scan was taken using the state of the art Morita scanner at ICE Diagnostic Centre. This very high definition but low radiation scan showed that there was sufficient bone in which to place an implant in 3D. The patient was happy with the plan and the final mock up result and a date was set for the initial surgery for implant placement. We discussed the advantages, disadvantages of implant treatment and its alternatives and the nature of the treatment with the patient in full details before seeking consent for treatment. The adjacent UR1 was highly compromised with aesthetic deficiencies but the patient was reluctant to have this tooth treated at this stage in absence of any symptoms.

Cemal would be my supervisor so I wasn't really nervous about it because I had previously observed him doing his own surgical placements and making them look so easy. I was aware he had placed a very large number of implants (over ten thousand), used many different implant systems and that he had been teaching implants to dentists from all corners of the UK for over 25 years. Cemal has trained a vast number of dentists including a large number of today's trainers who run their own courses throughout the UK.

I hugely relied on Cemal and assumed that, if needed, he would take over but I was wrong! The overall planning as well as his guidance and instruction were delivered so well, that I did the entire treatment from start to finish myself, with total confidence and ease. The only occasion that Cemal intervened was to suggest a minor correction to the angulation of the drill once I had prepared the initial pilot hole. A better awareness of drill angulation is something I need to address in the future when placing implants. Cemal later explained that a second person looking from a different angle was invaluable in ensuring that an implant is placed in the most optimum position even if the initial implant site has been prepared with a surgical guide. I am now aware that there are components that you can use to check and verify angulation as you proceed, so that errors can be corrected earlier. This applies when CBCT designed digital guides are used too. Drilling can be carried out accurately but implants can still be mis-angled when positioning them into the implant bed.

Although I tried to familiarise myself with the system and learned how it worked as much as I can, inevitably I had to rely completely on my mentor showing me which sequence I should use for the procedure. I believe it would take a few cases of my own before I could feel totally in charge when placing straightforward implants. The Megagen representative was so

useful in helping me to go over the system again in more detail and extended her full support whenever I needed it.

### Surgical procedure

In preparation for the surgical procedure, we had to gown up appropriately and set the surgery for an aseptic surgical procedure. I hadn't done this for many years and so was unfamiliar with the protocols; but there was an experienced nurse to hand who helped. There was also a second nurse who was not as experienced with surgical procedures but was on a NEBDN training programme in dental Implant nursing and was being guided by the more experienced nurse. Implant surgery requires a close teamwork and typically the surgeon is assisted by an experienced scrub nurse and a less experienced nurse is on hand as a "circulating nurse" to dispense materials and equipment as and when needed. Aseptic surgical field is thus maintained by having appropriate members of the team doing their respective jobs. I could have used the a-PRF technology but the scan did not indicate, in this case, a need for simultaneous grafting so use of this exciting new technique would have to wait until my next case.

After confirming consent and administering the local anaesthetic to the patient, Cemal instructed me to raise a small flap, and to extend it where I thought necessary. Because we had recently practiced raising flaps during the pig's head sessions, I felt comfortable being able to do this. Cemal then asked me to extend the flap, for better access, without going into the papillae. This was something I hadn't done before, but I was given good instruction and feedback, enabling me to confidently continue in a competent manner. The gingiva was a thick biotype, so it was harder to raise the flap; but eventually an adequate flap was raised buccally. The palatal gingiva was relieved either side of the opposing teeth to assess the palatal bone and get a more optimal view of the ridge.

Having not been nervous prior to the procedure, I soon felt the nerves kick in when having to drill a pilot hole for the implant. I had previously done surgical extractions which necessitated bone removal, but now I was in the position of having to preserve the bone. The initial pilot hole was positioned very slightly on the palatal aspect. Once it was deemed that the implant site was located correctly, the drills, in the sequence, were handed to me by Cemal and the implant slowly placed into the prepared osteotomy using a handpiece at 10-30 rpm.

There was a feeling of relief when the healing abutment was placed and I had completed the suturing. Given the very high

### 3mm healing abutment

After the cover screw was removed the gingiva had good contour. The shoulder of the implant had been placed 3mm subgingivally to preserve the biological width. This meant that the edge of the 3mm healing abutment was positioned at the gingival level (Figures 3 and 4). The final restoration was placed two weeks later and the patient was very happy with the result. (Figure 5)

### Reflection

I have learned that it is very important to select the correct case and to ensure that I perform more procedures under supervision before I make the decision to place them independently in my own practice.

Training Standards in implant Dentistry 2016<sup>1</sup> is a document published by the FGDP (UK). It recommends 'an appropriate quality assured course, having an experienced mentor, maintaining a detailed record of the range of training received, having an experiential log'.

It also gives guidance for what would be deemed 'straightforward' and 'complex' cases and encourages practitioners to be experienced and skilled enough to undertake implant cases based on this.

I am at present continuing to treat patients under Professor's close supervision at the Mentee School at ICE Postgraduate Dental Institute and Hospital. I can treat unlimited number of patients provided by the mentee school or bring my own patients to the centre. In doing so I am slowly building my confidence, clinical experience and my portfolio of cases in implantology.

I have benefited from attending Professor Ucer's highly structured Certificate course and being allowed to treat patients in the super and state-of-the-art training and clinical facilities offered by the Mentee School at ICE Hospital.

I can now continue my career development in implant dentistry by progressing to the MSc in Implant Dentistry programme at Edge Hill University where Professor Ucer is the clinical lead. **D**

### Reference

1. Training Standards in implant Dentistry 2016: FGDP(UK)