

Dentistry Clinical

Edited by Julian English (01923 851750)
julian.english@fmc.co.uk

How do I secure a crown to an implant?

In the latest in his series of articles on implant dentistry, Harry Shiers shows you the processes and options available in attaching a crown

Unlike a tooth where a crown can only be cemented to the prepared tooth or post and core, in implant dentistry a crown may be either cemented to an abutment or screwed to an abutment.

Cement retained

An implant-retained crown may be cemented onto an abutment, the abutment being one of many types. What is the rationale for cementing crowns rather than fixing them with screws? The cement-retained crown has the following advantages:

- i) The crown will have an unbroken surface, which allows the porcelain to retain its strength
- ii) The crown can be made less bulky as there is no screw hole to be accommodated
- iii) There is no compromise of aesthetics as the porcelain has complete continuity
- iv) Screws that retain crowns or bridges are small and can fracture.

Figure 1 demonstrates the Astra prepable abutment. Having been prepared at the laboratory and having the implant axis not coincident with the crown, cement retention is the only option here.



Figure 1 demonstrates the Astra prepable abutment



Figure 2 demonstrates the opening in the crown for the screw

Screw retained

A screw retained crown is held onto the abutment or implant by a screw. This can be a small screw which fits into the abutment, or the crown may be made as a part of the abutment at the laboratory, and the crown is then fixed to the implant using the abutment screw. What is the rationale for this method?

- i) A screw retained crown can be removed and the implant stack disassembled should the need arise.

ii) A screw retained crown with a deep sub gingival margin does not require cement retrieval at the time of cementation, which can be very difficult

iii) If porcelain fails on a screw retained crown, it may be easily removed before being repaired at the laboratory.

Figure 2 demonstrates the opening in the crown for the screw. This crown has been made as one unit with the abutment, and the unit is held onto the implant using an abutment screw.

Harry RBP Shiers BDS, MSc (implant dentistry), MGDS, MFDS, took his initial training in implant dentistry in 1989 with the Institut Straumann. He spent a year teaching undergraduates at The London Dental Hospital and since then he has spent a year at the Eastman Dental Institute studying implants prior to completing the two-year part time Master of Science in implant dentistry at Guy's Hospital, London. He currently runs the Harcourt House Implant Referral Centre in the west end of London where he places implants for referring GPs. Harry lectures extensively on implant dentistry throughout UK and sits on the editorial advisory boards of numerous dental publications..