

Abutments: screw retained or cement retained crowns

In his last article, Harry Shiers discussed the purpose of restorative abutments in implant dentistry. This time he describes how to attach a crown, bridge or over-denture to the abutment



Figure 1: The abutment with the screw hole protected, ready to receive a cemented crown



Figure 2: Shows the cemented crown



Figure 3: Demonstrates the crown from the labial three years after fit



Figure 4: A screw-retained crown. The hole may be initially sealed with cotton wool and a temporary restorative, then later with a composite restorative material



Figure 5: The radiograph demonstrates the implant axis co-incident with that of the abutment

We know that the restorative abutments in implant dentistry attach the crown, bridge, or over-denture to the implant, but how is the attachment made? A crown or bridge may be cemented onto an abutment or it may be screwed on. But why the difference and which is better?

Cement retained

An abutment which has had to be angled, and therefore does not have its axis coincident with that of the implant, cannot be screw retained if the screw hole is to pass through the occlusal surface of posterior teeth or lingual/palatal to the incisal edge of anterior teeth. In these cases the crown would have to be cemented onto the abutment. The advantages of this procedure include:

- Complete integrity of the porcelain of the crown
- No compromise of aesthetics of the crown
- Anteriorly the crown can be made less bulky.

Screw retained

If a single implant retained crown is to be screw retained, the screw must pass through the occlusal surface of the crown in posterior teeth and just palatal or lingual to the incisal edge of anterior teeth. This is possible if the abutment axis and the implant axis are coincident.

Advantages of this method include:

- The crown may be easily removed from the abutment
- There is no cement lute to retrieve sub gingivally
- The accuracy of fit of crown to abutment is greater.

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