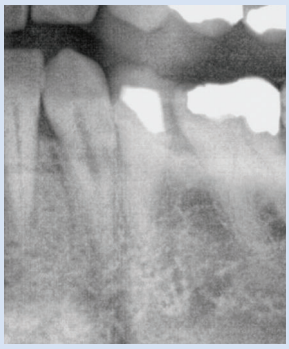
practice management

Watch this space

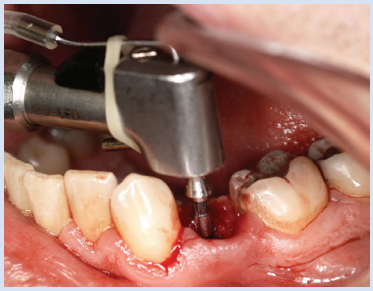
Stewart Harding describes how he acquired a different perspective on implant treatment.

Stewart Harding
is visiting implant consultant to the Bahrain Al-Nafees Medical Complex, a Fellow of the International Congress of Oral Implantologiests, honorary senior lecturer at Warwick University and a course tutor for the Master of Science Degree in Implant Dentistry.

●Fig 1. Fractured first premolar, observe the inclination of the canine.

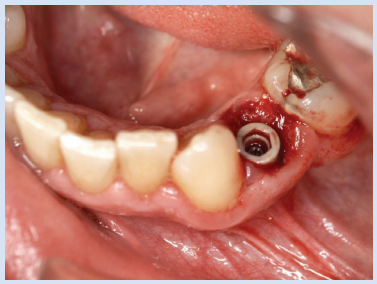


●Fig 2. Preoperative radiograph observe the canine root and proximity of mental foramen.

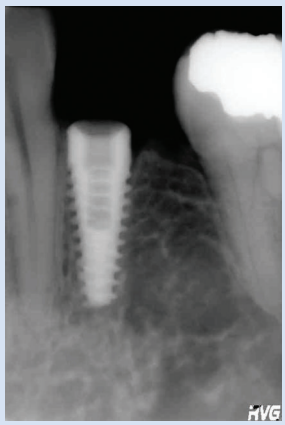


●Fig 3. Pilot bur being used to extend socket depth.

●Fig 4. Self-drilling tapered Ezeeplant with bioactive RBF surface.



●Fig 5. Ezeeplant with healing collar in place immediately after placement.



●Fig 6. Radiograph showing Ezeeplant completely filling the extraction socket avoiding vital structures.

To say that I was a little taken aback when my tooth fractured is an understatement, although not entirely unexpected considering I was eating a toffee at the time. It was decided that the tooth should be replaced with an immediate Ezeeplant implant with RBF bioactive surface.

I would like to say that this was fairly straightforward but unfortunately for me the root fractured several times during the extraction and it was necessary to use luxators.

Implant placement was also complicated by the proximity of the mental foramen and distal inclination of the canine root. If a less-tapered implant were used would have been likely that the extra drilling required to insert a cylindrical implant would have damaged the root of the canine. Alternatively if the implant were to be angled distally to avoid the root then there was a strong possibility that the mental nerve would have been damaged. Obviously I found both these possibilities unattractive.

Following extraction of the fractured root, the depth of the socket was increased by 3mm using a 2mm diameter internally irrigated pilot bur. As Ezeeplant is designed to be self-drilling, it could be screwed directly into the socket without additional drilling which reduced insertion time and preserved precious bone.

From my point of view this feature in conjunction with minimal drilling eliminated the possibility of nerve injury or damage to the adjacent canine root with subsequent loss of vitality. I was also grateful that the procedure was taking no time at all.

Primary fixation is required to resist micro movement and promote osseointegration. The unique combination of taper and thread-form of Ezeeplant generates high

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levels of primary fixation on insertion, allowing early implant loading. The acid etched and grit blasted micro-textured surface of Ezeeplant has been coated with a fine 20 micron layer of tricalcium phosphate to produce a bioactive surface. This Rapid Bone Forming surface promotes osseoconduction on the implant surface facilitating immediate replacement and early loading. The RBF bioactive surface is composed of synthetic resorbable tricalcium phosphate and is applied to the textured surface coating the threads. A strong bond is produced by the coating process which is torque resistant so the RBF bioactive surface remains intact during insertion. As integration progresses the RBF bioactive surface resorbs revealing the underlying textured surface.

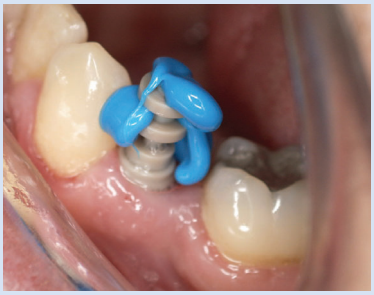
One of the problems often encountered with this type of immediate placement is that of tissue closure over the implant head and subsequent flap break down leading to post-operative infection. This problem was avoided by placing a transmucosal healing collar on top of the implant to protect the site and no sutures were used.

My tongue kept wandering to the space behind the canine and playing with the top of the healing collar. I now understand how healing collars unscrew and become loose. Later that night there was a little discomfort which I felt was associated with the extraction and not the implant insertion. The canine and lateral incisor were both tender and I was more aware of my molar teeth as the bite on that side had changed. Until now I can say I have never really appreciated the effect that the loss of a last remaining premolar can have on the bite and eating efficiency.

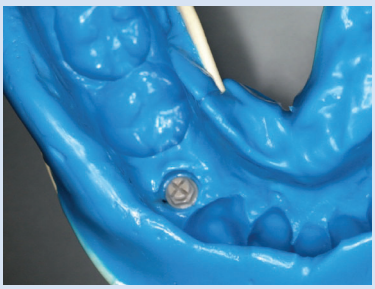
After six days, my soft tissue had healed sufficiently to permit a transfer impression to be taken for the new crown. It was not necessary to remove the healing collar to take a fixture head impression as the transfer coping clicks directly into the healing collar. This means that the implant is not subjected to damaging turning forces during the initial integration phase. During the impression procedure, which took only 15 minutes, the implant was not sensitive to pressure and felt extremely firm.

●Fig 7. Gingival healing after only six days.

●Fig 8. Click-in top impression coping inserted into the healing collar.



●Fig 9. Impression material injected through retention vents in Click-in top.



●Fig 10. Fixture head transfer impression.

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The implant placement took 45 minutes from beginning to end, so I was not late for my next patient.

I must compliment my partner John Ash on his skill and expertise especially as he had never placed an immediate implant. He exercised considerable patience in the light of my instructions via a hand mirror during the procedure. As a patient, I certainly saw things from a different perspective and cannot wait to get my tooth back. In the continued quest for even shorter treatment times for our implant patients, a bioactive surface which promotes bone formation opens up numerous treatment options for all of us…So watch this space.■

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