Implant prosthetic dentistry is not problem-free, and clinicians face complications including screw loosening, screw fracture, abutment fracture, damaged abutment threads, and damaged implant threads.1-6 Where the internal threads of an implant are damaged, they may become nonrestorable. Some techniques have been reported for salvaging the implant,2,6 including fabrication of a conventional dowel and core.2,3 However, this can cause extensive damage to the implant and may result in the need to remove it. Removal of the implant requires additional surgical procedures, increases cost, and delays restoration of the edentulous space.

Implant internal threads can be retapped, and an abutment can be secured in the implant with the help of new threads formed with a tapping tool. Retapping threads allows the use of original implant prosthetic parts during the fabrication of a new restoration. This may improve the long-term success of the new restoration and the implant because a favorable implant-abutment connection can be achieved with the use of original parts. In addition, this technique is safer than the conventional post-core fabrication procedure. However, caution should be used during tapping to form proper threads and not break the tapping tool. The fit of screw threads to the retapped threads may also be inferior to a regular, manufactured screw thread-implant internal thread fit. Therefore, the restoration and the implant should be monitored for integrity at follow-up appointments.

This report describes a procedure for salvaging an implant with damaged internal threads caused by a previously secured prefabricated, threaded root canal post in the implant screw hole (Fig. 1A, B). The loose crown and root canal post were removed. New threads were formed with a tapping tool, and a new crown was fabricated from original parts.

**PROCEDURE**

1. Remove the loose crown with pliers (GC Pliers; GC America) and the prefabricated post with a post removal tool (CYTCO-K; Dentsply Intl) (Fig. 1C-E). Use a tissue punch (Salvin Dental Specialties) to expose the implant platform (Tapered Screw Vent; Zimmer Dental), which was completely covered with gingiva. Control the bleeding with a hemostatic agent (Viscostat; Ultradent Products Inc).

2. Attempt to screw a healing abutment (Zimmer Dental) to the implant to see whether it engages the internal threads of the implant. Make a periapical radiograph to evaluate whether the abutment is completely seated (Fig. 1F).

![Figure 1. A, Periapical radiograph of loose restoration with prefabricated post.](image-url)
3. If the abutment does not engage the implant’s internal threads and the misfit between the abutment and implant can be radiographically confirmed, use a tapping tool (model 172UWF thread tap; Zimmer Dental) to form new threads in the internal surface of the implant (Fig. 1G). Remove the head of the tool if it is too large to use between the adjacent teeth (Fig. 1H).

4. Use the tapping tool in a clockwise direction, and each time resistance is felt, remove the tool in a counter clockwise direction. Exercise caution during retapping and rinse the internal surface of the implant with water after each attempt. Repeat the procedure until a proper depth is achieved for an impression post to completely seat (Fig. 1I).

Figure 1. (continued) H, Thread tapping tool in implant. I, Radiograph of tapping tool in implant. J, Radiograph of seated impression post. K, Radiograph of abutment.

Figure 2. Intraoral view of definitive crown.
5. Evaluate the impression post (Zimmer Dental) on the implant, and make a radiograph to determine whether the impression post is completely seated on the implant platform (Fig. 1J).
6. Once the impression post is completely and securely seated, make a definitive impression with polyvinyl siloxane impression material (Aquasil Ultra; Dentsply Caulk) for the fabrication of a definitive crown on the implant with the new internal threads (Fig. 1K, Fig. 2).

REFERENCES

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