drainage of the root canal.[5] However, within these four objectives there can be problems:

- What was used to irrigate the canal during extirpation?
- Did complete debridement occur?
- Was an intra-canal medicament placed?
- What was the access cavity sealed with?
- How did the radio-opaque material enter the canal?

Causes for the repeated episodes of acute inflammation may include incomplete removal and cleansing of the pulp, leakage via the coronal seal and the presence of the radio-opaque foreign object in the root canal. Mechanical instrumentation with 0.5% sodium hypochlorite with the addition of calcium hydroxide will allow complete disinfection in 90–100% of cases.[6,7] In a radiographic examination of 1010 teeth, a study showed that the coronal seal is significantly important in the endodontic treatment of teeth compared to the treatment itself.[8] The coronal access was sealed rather than leaving it open for drainage and relief of pressure, as this can lead to a decrease in the long-term prognosis of the tooth, as well as causing more acute episodes of pain.[9] This will have the advantage of having a debrided canal free of contamination by saliva, debris and other bacterial flora. The prescribing of antibiotics occurred owing to the presence of systemic signs. However, a prospective trial demonstrated that post-operative pain after instrumentation can be reduced (compared to a placebo) when various medications (e.g. penicillin, ibuprofen) were administered.[10]

The outcome of the treatment was satisfactory. The injured tooth returned to its original position. The authors suggest that one of three options may have occurred to explain the presentation. The periodontal fibres may only be weakened by the earlier inflammation, have been replaced or merely stretched. Hence, when the periapical abscess subsided, the tooth assumed its normal position.

The success rate for the apical closure of the immature maxillary right central incisor can be expected to be good with figures of 90%.[11,12] The five-year success rate is over 85% with an adequate root filling.[13]

Although the prognosis of the tooth is guarded, this case shows that repeated episodes of inflammation causing severe extrusion can still be treated satisfactorily by following the basic principles of abscess treatment, i.e. removal of infected tissue by mechanical and chemical cleansing and the prevention of further contamination by having a good coronal seal.

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ABSTRACT

CAN WE FIX IT? – YES WE CAN!
Salvaging a Porcelain/Metal Bridge with a Bonded Porcelain-fused-to-metal Overcasting. A. Mancuso. *General Dentistry* 2003; **51:** 456–457.

Multi-unit porcelain-fused-to-metal restorations occasionally sustain porcelain fracture. Direct intra-oral repair with composite resin is difficult, and the variations in colour and texture of the materials often result in an unsatisfactory aesthetic appearance. Furthermore, although the bond strength of the adhesive systems may be satisfactory, marginal leakage and abrasion of the repaired material may soon lead to further complaint from the patient.

This paper describes a case where such a porcelain fracture in an extensive restoration was repaired using a porcelain-fused-to-metal veneer overcast. The remaining porcelain was removed from the labial surface, and the preparation extended deeply into the mesial and distal embrasures and a 1.5 mm incisal wrap extended onto the palatal surface. To provide further retention, 'potholes' were created on the labial metal surface, and the entire preparation was air abraded using a micro-etcher. A polyvinylsiloxane impression was taken and a metal-ceramic veneer prepared in the laboratory.

Two weeks later the preparation was etched with phosphoric acid, dried, and the veneer bonded with a dual-cure resin cement. Normal finishing and polishing resulted in a restoration that was both functional and aesthetically pleasing, and which provided a simple and economic solution to a difficult restorative problem.

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