

extraction was entirely avoided. It would generally be anticipated that a lower third molar would remain in its position with the risk of paraesthesia remaining if extraction were considered at a later date. This degree of movement of a third molar seems highly unusual and no reports of third molars erupting in this manner could be identified. Regardless of this case being isolated, clinicians must consider that, even if removal of a tooth complies with NICE guidelines, it may not be necessary to remove at that stage in the absence of symptoms. For motivated patients with good oral hygiene, monitoring should always be considered as a treatment option.

## References

1. National Institute for Clinical Excellence. *Guidance on the Extraction of Wisdom Teeth*. London: NICE, 2000. Available at: [www.nice.org.uk/guidance/ta1](http://www.nice.org.uk/guidance/ta1) (Accessed November 2015).
2. Hill CM, Walker RV. Conservative, non-surgical management of patients presenting with impacted lower third molars: a 5-year study. *Br J Oral Maxillofac Surg* 2006; **44**: 347–350.

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## Treatment of complicated crown or crown-root fracture: some additional information

The article entitled *Dental Trauma Part 2: Acute Management of Fracture Injuries* in the December 2016 issue of *Dental Update* was an interesting read.<sup>1</sup> Indeed, it is very well summarized and highlights the acute management of various tooth fractures associated with trauma. The presentation of information together with a series of illustrations describing various injuries and their management is impressive. However, I would like to highlight an important fact about Cvek pulpotomy which should have been mentioned in the article. Cvek pulpotomy can be carried out in immature permanent teeth irrespective of the time elapsed since the injury, provided that the tooth is still vital.<sup>2</sup> However, Cvek pulpotomy proves to be very successful

only if carried out within 24–48 hours following injury to young permanent teeth with completely formed roots,<sup>2</sup> although some success has been achieved when teeth with traumatic pulp exposure for as long as four days were treated by Cvek pulpotomy. However, the success rate is greatly reduced after 48 hours following traumatic pulp exposure.<sup>2,3</sup> Nevertheless, every attempt should be made to preserve the vitality of young permanent teeth as it will result in continued dentine deposition in the cervical area, thus strengthening the tooth.<sup>4</sup> Besides, as already mentioned in the article by Djemal *et al*,<sup>1</sup> upon pulp excavation, if healthy pulp tissue cannot be reached up to the cervical level, root canal treatment should be carried out. This is because the cell rich coronal pulp tissue is more likely to facilitate healing after Cvek pulpotomy as the radicular pulp is more fibrous and unicellular.<sup>4</sup> Hence, the judgement of whether to perform Cvek pulpotomy or pulpectomy on a young permanent tooth with completely formed roots eventually lies with the treating physician.

In addition to Cvek pulpotomy, an additional treatment option is direct pulp capping which was not mentioned in the article.<sup>1</sup> Direct pulp capping can be performed instead of pulpotomy if the pulp exposure is pin point and the treatment is carried out within one hour following injury.<sup>4</sup> Furthermore, the importance of isolation when carrying out direct pulp capping or Cvek pulpotomy cannot be overemphasized. In the article by Djemal *et al*,<sup>1</sup> the use of rubber dam was not mentioned. Moreover, the illustrations also do not depict the use of rubber dam while Cvek pulpotomy was carried out. Ideally, during any form of treatment involving the pulp tissue, use of rubber dam is mandatory to ensure long-term success.

## References

1. Djemal S, Singh P, Polycarpou N, Tomson R, Kelleher M. Dental trauma Part 2: Acute management of fracture injuries. *Dental Update* 2016; **43**: 916–926.
2. Cvek M. A clinical report on partial pulpotomy and capping with calcium hydroxide in permanent incisors with

complicated crown fracture. *J Endod* 1978; **4**: 232–237.

3. Fuks AB, Chosack A, Klein H, Eidelman E. Partial pulpotomy as a treatment alternative for exposed pulps in crown-fractured permanent incisors. *Dent Traumatol* 1987; **3**: 100–102.
4. Bimstein E, Rotstein I. Cvek pulpotomy – revisited. *Dent Traumatol* 2016; **32**: 438–442.

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## Splinting traumatic dental injuries

The article entitled *Dental Trauma Part 1: Acute Management of Luxation/Displacement Injuries Management* was informative and provided readers with a comprehensive understanding of the management and sequelae of such injuries.<sup>1</sup> Interestingly the authors only mention splinting with composite and 0.018" stainless steel wire. The online dental trauma guide alludes to other possible splints to use in such instances, 'acid-etch flexible resin splints, acid-etch-wire composite splints, acid-etch composite nylon line splints, acid-etch orthodontic wire splints and titanium trauma splints'.<sup>2</sup>

There doesn't appear to be any clear consensus on the exact type of splint to use according to the IADT trauma guidelines and online *Dental Trauma Guide*.<sup>3,2</sup> Clinicians have their own preferences, depending on their experience, availability for specialist input, place of work or department, availability of materials and availability of nursing staff for assistance. Having worked in Accident and Emergency, as well as on a Paediatric Dental Department, I have treated numerous patients with traumatic dental injuries requiring immediate management. The splints of choice proving to be the most effective in the units where I have worked have been constructed using orthodontic brackets and 0.014" NiTi wire. There are a number of advantages to using orthodontic brackets; ease of placement (especially if working single handily in A&E), the ability to encourage orthodontic movement

if required, removal (and replacement if needed) of the wire for mobility and sensibility testing, and quick removal of brackets provided debonding pliers are available.

I would refer readers to the previous correspondence earlier in the year on this topic in the *British Dental Journal* which highlights the various opinions on this topic.<sup>4,5</sup>

I would urge readers to be aware of the importance of diagnosing and managing traumatic dental injuries and refer them to the wealth of information available via journals, articles and online guides to aid this process.<sup>6</sup>

## References

1. Djemal S, Singh P, Tomson R, Kelleher M. Dental trauma Part 1: acute management of luxation/displacement injuries. *Dent Update* 2016; **43**: 812–824.
2. Dental Trauma Guide. *Dental Trauma Guide Home*. [www.dentaltraumaguide.org](http://www.dentaltraumaguide.org) (Accessed 15 December 2016).
3. Diangelis A, Andreasen JO, Ebeleseder KA, Kenny DJ. International Association of Dental Traumatology guidelines for the management of traumatic dental injuries: 1. Fractures and luxations of permanent teeth. *Dent Traumatol* 2012; **28**: 2–12.
4. Allison J, Garlington G. Orthodontics: treating avulsed permanent teeth. *Br Dent J* 2015; **219**: 514–515.
5. Djemal S, Alani A. Dental trauma: splinting with wire and composite. *Br Dent J* 2016; **220**: 220–221.
6. International Association for Dental Traumatology. International Association for Dental Traumatology: For Professionals. [www.iadtdentaltrauma.org/for-professionals.html](http://www.iadtdentaltrauma.org/for-professionals.html) (Accessed 15 December 2016).

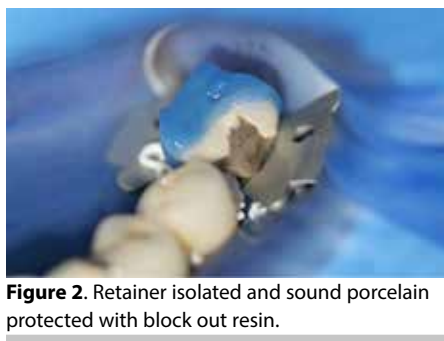
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## Dear Editor

In light of the discussions in the literature of repair versus replacement I was interested to see the very useful technique tip in the January 2017 issue, where the 'Cojet technique' was used alongside a



**Figure 1.** Porcelain lost from distal abutment 2005.



**Figure 2.** Retainer isolated and sound porcelain protected with block out resin.

universal bonding agent containing silane.

Whilst there are no clinical evaluations of the long-term effectiveness of this technique, I thought the readers might like to see a repair effected on the distal retainer of a four unit bridge 12 years ago (Figure 1). The tooth was isolated and block out resin applied to the remaining ceramic so as not to roughen the surface with the Cojet sand (Figure 2).

At the time there were no bonding agents which contained silane and so, in the case described, the conventional approach using Cojet sand, hydrofluoric acid, silane, bonding agent and composite was employed. The restoration was completed and the patient was happy with the result (Figure 3).

Eight years later another piece of the porcelain fractured but the composite repair was still present. A further repair was undertaken.

Four years later both repairs are still present (Figure 4).



**Figure 3.** Repaired retainer 2005.



**Figure 4.** Repaired retainer 2017.

I would agree entirely with Trevor Burke when he says that, in his experience, patients are very grateful for such repairs, especially when the alternative would be significantly more expensive and require extensive treatment. Such treatment can be expensive, both financially and biologically, in that the tooth or teeth have to endure further 'assaults'. Repairing is both cheaper and totally non-invasive.

In this case, the tooth was not visible, but the patient requested something be done because she didn't like the appearance.

It is not possible in all cases to provide an evidence base for all procedures undertaken in practice, but a sound knowledge and understanding of dental materials and their applications allows us to salvage situations that otherwise might prove very difficult.

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