

# Non-metallic foreign body embedded inside tooth

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## DESCRIPTION

Children often exhibit habitual behaviour involving the oral cavity. The occurrence of foreign bodies such as toothpicks, pencil leads,<sup>1</sup> staple pins, metal screws, crayons, tomato seeds, beads and needles,<sup>2</sup> stuck in the pulp chambers, exposing traumatically or carious injured permanent and deciduous teeth, are identified by chance on radiographic inspection.

A 10-year-old girl presented to the dental department with 3-day pain in the upper front tooth. Patient history revealed that the child had dental injury to the permanent upper right central incisor twice previously. Initial trauma occurred 6 months before, while playing in her home and 3 days prior to presenting to the dental department when she fell from a water tank. In addition, the patient had a habit of rotating pencil lead tips in the mouth. The medical history was unremarkable. The intraoral examination revealed a crown fracture involving the enamel, dentine and pulp in relation to the upper left central incisor (figure 1) with a greyish black discolouration in the open pulp cavity (figure 2). Between the permanent lower central incisors and the right lateral incisor, there was a greyish black discolouration that indicated a habit of pencil lead tipping in the oral cavity (figure 3).

Radiographic examination of the tooth revealed periapical radiolucency and unusual radio-opacity in the coronal portion (figure 4).



**Figure 3** Permanent lower central incisors and the right lateral incisor showing a greyish black discolouration.



**Figure 1** Fracture of the permanent upper left central incisor involving the enamel, dentine and pulp.



**Figure 4** Intraoral periapical radiograph indicating periapical radiolucency and radio-opacity in the coronal portion of the permanent left central incisor.



**Figure 2** Open pulp cavity with a greyish black discolouration.

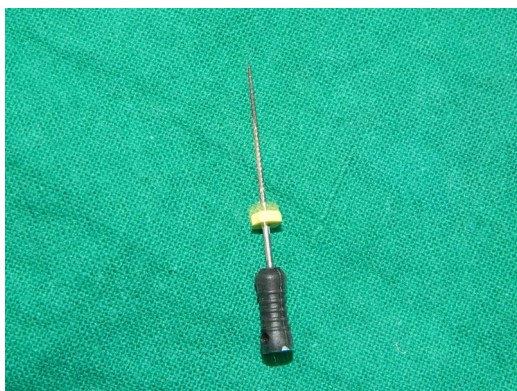


**Figure 5** Powdered pencil lead removed from the pulp chamber.



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**Figure 6** Endodontic H file used to remove the foreign body.

Root canal treatment of the affected tooth was planned and access was gained to the pulp chamber, where the pencil lead in the form of powder was embedded (figure 5). Pencil lead powder was completely removed with an endodontic H file with copious saline irrigation saline (figure 6), and the root canal was obturated with gutta percha.

### Learning points

- ▶ Timely diagnosis and management of foreign bodies in the tooth should be performed in order to avoid further complications.
- ▶ Recognition of habitual pencil lead tipping as a cause of embedded foreign bodies should be made by the general dentist in the majority of cases.
- ▶ Removal of foreign objects from the root canal is typically an important contest for the practitioners. Meticulous case history taking and clinical and radiographic assessment are essential to a decision about the location, size and nature of the foreign body.

**Competing interests** None.

**Patient consent** Obtained.

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### REFERENCES

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- 2 Nernst H. Foreign body in the root canal. *Quintessence* 1972;23:26.

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