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CASE REPORT

Dental amalgam tattoo consequent to a human bite injury

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Introduction

Dental amalgam tattoo, affecting approximately 0.4–0.9% and 8% of the American and Swedish adult populations respectively, is the most common localised pigmented lesion in the mouth and must be differentiated from melanoma.² We present the first reported case of its interpersonal implantation by a human bite and of its detection in an extraoral location.

Case report

A thirty-four-year-old right-handed female support worker underwent flexor and extensor tenolysis with dorsal capsulotomies of the proximal and distal interphalangeal joints of her dominant index finger for contractures that were unresponsive to intensive physiotherapy and splinting. One year previously she had sustained occlusional human bite punctures to both the dorsal and volar aspects of the ulnar side of the digit. The injury had not been previously explored. A black macular elliptical lesion measuring up to 2 mm in diameter was found, incorporated

into the flexor sheath on the ulnar side of the second annular pulley (Fig. 1), and an excisional biopsy was performed.

Histological examination confirmed the presence of vascular connective tissue impregnated with pigmented foreign matter consistent with dental amalgam, which was surrounded by multinucleated giant cells in a chronic inflammatory granulomatous reaction as has previously been described.³

Discussion

Human bite injuries are very common with an estimated incidence of 45 per 100,000 adults per annum.⁸ Those affecting the hand have a noxious reputation for developing serious infective and functional complications.⁵ Retained post-traumatic foreign bodies are a well-documented medicolegal hazard,^{1,6} thus wound exploration⁴ and radiographs⁷ have been recommended as routine steps in the management of bites that breach the dermis. Radiographs are also recommended when investigating suspected dental amalgam tattoos.² Clinicians relying on radiographs to exclude foreign bodies, however, may miss radiolucent or fine particulate radio-opaque matter.^{2,4}

This case clearly supports that acute penetrating human bites should be both radiographed and explored for foreign matter to facilitate prompt

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Figure 1 Note the proximity of the black elliptical dental amalgam tattoo to the second annular pulley.

removal, and that a high index of suspicion for foreign body implantation be maintained. Melanoma would be an unusual differential diagnosis in this particular case.

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