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Technical note

Alternative method for temporary stabilisation of displaced mandibular fractures

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A 19-year-old man presented to the oral and maxillofacial department with a displaced fracture of the right mandibular parasymphysis after an alleged assault (Fig. 1). He was admitted, given antibiotics intravenously, and placed on the emergency theatre list for fixation. Because of the number of emergency cases waiting, his operation was delayed for over 12 hours. Previous studies have shown that this is commonplace for oral and maxillofacial surgical (OMFS) patients (60% are on acute theatre lists waiting more than 12 hours, and 29% wait more than 24 hours).[1,2]

To make patients more comfortable, displaced fractures are often reduced using a bridle wire as temporary stabilisation before definitive fixation. Traditionally a stainless-steel bridle wire is placed interproximally around the teeth adjacent to the fracture, usually with the use of local anaesthetic. We have found that it can be difficult to get access to wiring kits out of hours, and the technique can be awkward to complete in the accident and emergency department (often without good lighting or assistance).

Fig. 1. Displaced fracture of the right parasymphysis.

Fig. 2. Silk suture used to reduce and temporise the fracture.

We propose the use of a thick braided silk suture, 1/0 or 2/0, as an alternative to a stainless-steel bridle wire (Fig. 2).

In this instance, we flossed a 2/0 braided silk suture through the contacts on either side of the fracture, which we then manually reduced, and secured the suture with a simple hand-tied knot. This made the patient more comfortable and reduced the pain while he waited for definitive fixation. The suture was left in situ until he went to theatre, where it could possibly have been of use during the definitive reduction and fixation.

The technique is minimally invasive and, in our experience, has rarely required anaesthesia. Although a braided suture has a lower tensile strength than stainless steel, we have

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found that, as a temporary measure, a silk suture can work just as well. Sutures are much more readily-available within emergency care departments than bridle wires and wiring kits, they are less technique-sensitive when used on the wards or in accident and emergency, and we have found that patients tolerate the process well.

Given that OMFS patients, particularly with fractured mandibles, often have to wait more than 12 hours for an emergency theatre, a suture bridle is an easy alternative to traditional wiring to provide them with quick, temporary stabilisation, which will help to reduce their pain and discomfort before definitive surgery.

Conflict of interest

We have no conflicts of interest.

Ethics statement/confirmation of patient's permission

Ethics approval not required. We have obtained consent from the patient.

References

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