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Short communication

Fragments of drains retained during operations on the temporomandibular joint

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Abstract

Drains are robust and reports of breakages and retained fragments are rare. There is no consensus about the management of such cases and we know of no reported cases. We present the case of an 18-year-old man with a retained drain fragment after repair of an open condyle.

Keywords: Drain; Retained; Fragment; TMJ

Introduction

Surgical drains may break for many reasons and the cause is not always apparent.[1] They are generally regarded as robust, however, and reports of breakage and retained fragments are rare. These fragments may not cause any symptoms, or lead to chronic pain or infection, and currently there is no consensus on their best management.

Case report

An 18-year-old man presented with a displaced lower right condyle and a fracture of the left parasymphysis. We reduced and plated them through retromandibular and intraoral approaches, respectively, and insterted a single 40 ml bellows low vacuum lantern drain (Summit Medinorm Ltd) over the condyle. The next day we were initially unable to remove the drain and, while no perforations were apparent when it was eventually removed, we were concerned about fragmentation. As we did not know the original length of the drain, we could not ascertain if it had all been removed. Nothing was palpable on repeat examination, and soft-tissue radiographs showed no obviously-retained fragments, so initial management was close clinical follow up with further imaging. There were no symptoms or conclusive evidence of any retained fragment, and there was the potential for the fracture and plates to be contaminated if we reoperated. It was thought that if fragments were present they would be sterile, and so the risk of contamination could be minimised by delaying investigation until the fracture had healed, when it could be removed at the same time as the plates.

Ultrasound (US) showed that there was a 1 cm retained fragment lying superficially within the tissues, and orthopantomogram (OPG) clarified its position over the right condylar neck (Fig. 1). Departmental consultants contacted the manufacturer of the drain, but as none of them had seen anything similar previously, we reviewed publications on the subject, and decided on a course of close clinical follow up, with a view to removing the fragment and plates six weeks after the original operation. After one week, however, a persistent salivary fistula developed, and the decision was made to remove it.

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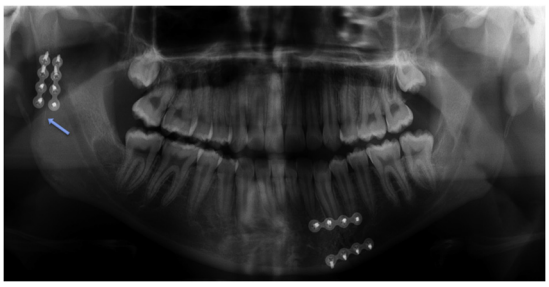

Fig. 1. Orthopantogram at follow up showing retained fragment of drain over right condylar neck (arrow).

Preoperative US confirmed the position of the fragment, and facilities were available for check US if necessary. We reopened the original wound, located a 4 cm fragment that had penetrated through the parotid capsule with no obvious retaining features, and removed it with minimal effort.

A salivary fistula persisted postoperatively from the retromandibular wound, but it resolved after a short course of hyoscine, and the patient recovered fully.

Discussion

We know of few reports of drains that have been retained around joints, and we found none within oral and maxillofacial surgical journals, so we think that there is little evidence for or against their removal.

Evidence for the removal of sterile fragments is limited, but Zeide and Robbins[2] described four orthopaedic patients who had suction drains left in situ with no reported complications. Similarly, Gausden et al[3] reported no complications from two lumbar drains retained within soft tissue for over two years, and Gheorghiu et al[4] cited no major complications after eight years when the drain had been left within the joint after total knee arthroplasty. Cox and Friess[5] however, described a patient who had had a total knee replacement and developed a flexion contracture from a retained drain that necessitated removal after five months.

These limited examples suggest that in selected instances there is a role for conservative management, and that the retention of a fragment of drain is not an absolute indication for removal unless there is a specific problem.

The choice of imaging when looking for retained fragments is important because of the relative opacity and interposition of structures, and we think that OPG offers better visualisation than plain soft-tissue imaging. We found US to be a useful adjuvant in gauging depth and position, but found that views were limited by acoustic shadowing, and could lead to underestimation of the length of the fragment.

Conflict of interest

We have no conflicts of interest.

Ethics statement/confirmation of patient's permission

Not applicable.

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