Figure 2 Intraoperative lateral radiograph showing height measurement between adjacent motion segment (22mm) and size of corpectomy defect (19mm). This height has been measured formally using a measurement device on the images but can be performed more crudely simply by drawing two lines on a piece of paper and comparing the distances at the adjacent motion segment and corpectomy site.

Figure 3 Intraoperative lateral radiograph showing expansion of the cage (black arrow) to match the height of the adjacent motion segment (cage height and adjacent motion segment height both now 22mm). The facet joints have not been distracted.

be achieved in a reproducible manner. This technique provides a rough guide to sizing and should be used as an adjunct to other techniques. It is important to recognise and account for magnification errors on imaging.

Endoscopic-assisted local intralesional curettage and excision of intraosseous lesions in the talus

CJ Pearce¹, Y Chen², EM Puhaindran³

¹National University Hospital, Division of Foot and Ankle Surgery, Singapore

²National University Hospital, Department of Orthopaedic Surgery, 1E, Kent Ridge Road, NUHS Tower, Block, Level 11, Singapore 119228

³National University Hospital, Division of Musculoskeletal Oncology, Singapore

CORRESPONDENCE TO

Christopher Jon Pearce, E: chris.pearce@doctors.net.uk
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BACKGROUND

Traditionally, open curettage and excision of intraosseous talar lesions is hampered by poor visualisation of the bony cavity. A large cortical bone window is often required to increase working space and to provide better illumination. This is difficult in a bone that is 60% covered in articular cartilage, such as the talus. A large bone window increases postoperative pain and the risk of iatrogenic fractures, and damages blood supply to the talus. We present a novel endoscopic technique to improve access to this difficult area.

Figure 1 A 20 × 15 mm cortical window is created on the anterior aspect of talus

Figure 2 A magnified view of the anterior talus and the cortical bone window through the arthroscopic camera

Figure 3 The view of the bone tumour cavity from a 2.7-mm 30-degree arthroscope

TECHNIQUE

Through an anterior approach, a 20 × 15 mm cortical window is made in the talar neck (Figs 1 and 2). After initial curettage with curettes and bone nibblers, a 2.7-mm 30-degree arthroscope is introduced into the tumour cavity (Fig 3). After gross tumour debulking, the inner surface of the cyst wall is stained with methylene blue and cleared with an arthroscopic burr (Fig 4). A final endoscopic evaluation of the bone cavity is performed to confirm the complete removal of all tumour tissue. This same window also provides easy access for performing local adjuvant treatment (e.g. argon beam coagulation and absolute alcohol) and the packing of polymethylmethacrylate bone cement (Figure 5).

Figure 4 The cavity is stained with methylene blue and remnant tumour tissue is removed with an arthroscopic burr

Figure 5 Postoperative x-rays showing bone cement in the tumour cavity and the ankle being protected in a below knee cast

Postoperatively, the patient is immobilised in a below-knee cast for six weeks before gradual return to full weight bearing.

DISCUSSION

This endoscopic technique allows a thorough treatment of intraosseous talar lesions by providing an easy access, continuous illumination and a detailed magnified view of the entire tumour cavity, without the need to create an excessively large bone window.