Technical Section [TECHNICAL NOTES AND TIPS

Introduction of antibiotic-loaded cement during hip hemiarthroplasty washout to reduce the need for full revision surgery

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doi 10.1308/rcsann.2016.0322

BACKGROUND

Infections in prosthetic joints are an uncommon (but disastrous) complication of arthroplasty. Infections associated with hemiarthroplasty for intracapsular fractures of the femoral neck can be fatal.¹

Polymethylacrylate cement can be used to deliver antibiotics directly to an area of infection, thereby reducing the need for long-term administration of antibiotics.² This method is used commonly in two-stage revision arthroplasty for infected total hip replacements.

TECHNIQUE

During washout for suspected infection of a prosthetic joint after modular hemiarthroplasty (Exeter Unitrax®; Stryker, Kalamazoo, MI, USA;

Fig 1a), the head component is removed, followed by sampling for microbiology and pulse lavage. Foam from the packaging is placed into the collar insert (Fig 1b). Antibiotic-loaded cement is prepared without use of a vacuum to allow optimum elution of the antibiotic.³ This cement is inserted into the space between the collar insertion and inner surface of the head using a McDonald elevator. The cement is allowed to set, the foam insert is removed, and the head replaced.

This technique allows delivery of antibiotics directly around the prosthesis, as well as removing a potential space for collection of debris and microbial colonisation.

DISCUSSION

In cases of suspected infected hemiarthroplasty, introduction of additional antibiotic-loaded cement at the time of washout may be desirable compared with revision procedures. The aim is to reduce the systemic load of antibiotics, remove dead space for biofilm formation, and prevent the need for full revision surgery.⁴

References

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(a) Modular head of Exeter Unitrax®

(b) Antibiotic-eluting cement within the Exeter Unitrax® head with a foam collar insert protector

Figure 1 Introduction of antibiotic-loaded cement using the Exeter Unitrax® system (Stryker)

An efficient method of soft tissue preparation of amputated digits for replantation

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doi 10.1308/rcsann.2017.0034

Many techniques have been described to improve the efficiency of preparing amputated digits.^{1,2} The amputated part is examined to assess for viable vessels before replantation is undertaken. This task is often done without an assistant.

We describe a simple technique that allows the operator to maintain stability of the amputated digit while performing dissection under the microscope. Vascular slings are placed over the digit and pinned down on either side using 22G needles (Fig 1). Furthermore, the stabilised digit can be adjusted by turning it under the sling, thereby allowing easier midlateral access for the surgeon.