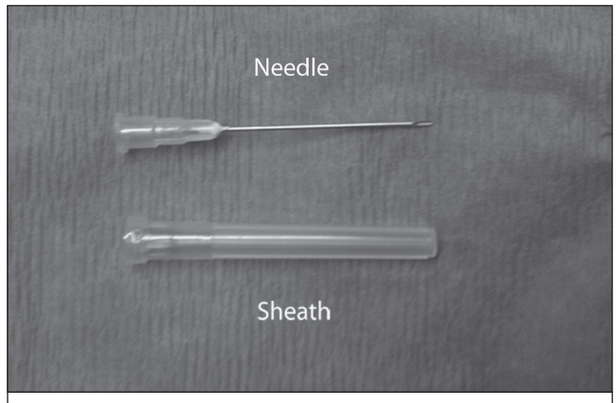

Figure 1 A 20-gauge needle and sheath

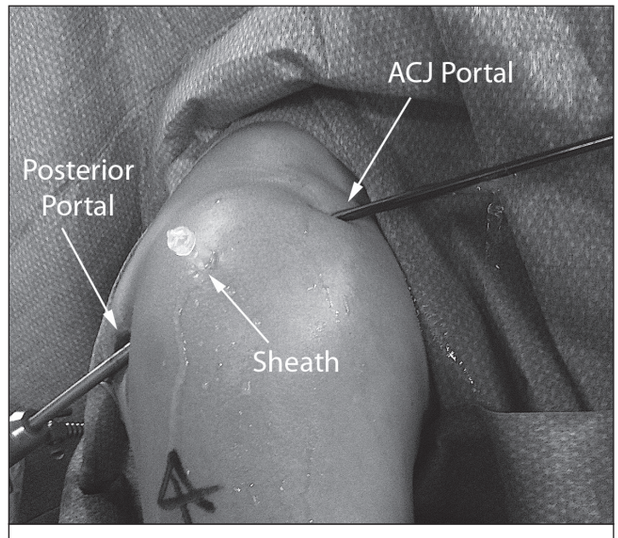

Figure 2 Right shoulder arthroscopy with standard posterior subacromial camera portal with sheath placed into the lateral portal to prevent excessive fluid escape and turbulence. Anterior acromioclavicular joint (ACJ) portal is used to perform joint excision with clear visualisation.

A simple and cost-effective technique to prevent turbulence and improve visualisation during shoulder arthroscopy

K Theivendran, MM Shah
Department of Orthopaedics, Walsall Manor Hospital, Walsall, UK

CORRESPONDENCE TO
Kanthan Theivendran, E: kanthan@hotmail.co.uk

BACKGROUND

During arthroscopic shoulder surgery, subacromial space bleeding can obscure and frustrate attempts to obtain effective visualisation during such procedures as acromioclavicular joint (ACJ) excision or rotator cuff repair. In many cases this is due to fluid leakage from non-cannulated portals. Fluid flow from these portals creates a suction effect by virtue of Bernoulli's principle and draws blood into the subacromial space. Digital pressure over these portals can prevent this; however, an assistant will be required during the procedure.[1] We describe an independent, simple and cost-effective way of controlling turbulence within this closed system.

TECHNIQUE

Using the standard posterior subacromial portal, the subacromial space can be visualised. A lateral portal is created by a stab incision using a No 15 blade and a subacromial decompression can be performed. When more than two portals are required, such as the anterior portal for an ACJ excision, a sterile 20-gauge needle sheath (Fig 1) can be inserted into the lateral portal to prevent fluid leakage and turbulence (Fig 2). The needle can be used to localise the anterior portal for the arthroscopic ACJ excision.

DISCUSSION

This technique has not been described previously and allows the surgeon to operate independently without the use of an assistant to apply digital

pressure to prevent turbulence and improve visualisation. The 20-gauge needle and sheath are commonly available and cost-effective compared with branded arthroscopic cannulae.

Reference

1. Burkhart SS, Danaceau SM, Athanasiou KA. Turbulence control as a factor in improving visualization during subacromial shoulder arthroscopy. *Arthroscopy* 2001; **17**: 209–212.