Air as contrast media for hip arthrogram

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BACKGROUND
Hip arthrography is used in the diagnosis and treatment of hip pathology.¹ Different techniques and contrast media for confirming accurate position of the needle intra-articularly have been described.²We describe a safe technique for hip arthrogram.

TECHNIQUE
We use fluoroscopic guidance and an 18G spinal needle with a 10 ml syringe.³ The spinal needle is introduced to the junction of the head and neck, the intra-articular position is confirmed by injecting 5 cm³ air into the joint (as opposed to the more usual iodine-based contrast; Fig 1a–c).⁴
A contrast ring of air around the head neck junction is clearly seen and confirms the satisfactory intra-articular positioning of the needle

with no need for any other contrast media (Fig 2a). We have found that, if the tip of the needle is not in the joint (allowing air to spread extra-articularly), the subsequent air arthrogram is not obscured by the previous extravasation (Fig 2b,c).

DISCUSSION
The air arthrogram is a satisfactory cost-effective technique. Injection of air may carry a risk of infection; however, in the environment of a clean-air theatre with laminar flow, this is unlikely. We have found no complications in over 50 cases and we do recommend this technique for diagnostic and therapeutic hip arthrography.

References

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Figure 1 Examples of contrast arthrography: (a) good; (b) indifferent; (c) difficult to interpret due to extravasation.

Figure 2 (a) Air arthrogram; (b) air extravasation; (c) extravasation not obscuring subsequent air arthrogram.