Figure 4 Intraoperative image revealing perforation of the femur following insertion of a malaligned femoral prosthesis during hemiarthroplasty surgery

DISCUSSION

Traditionally, the neck cut is made prior to canal preparation. Inserting a rasp too anterior in the exposed medulla directs it posteriorly, risking penetration of the posterior femoral cortex (Fig 4). On implantation of the prosthesis, there is a risk of iatrogenic injury to the sciatic nerve in the posterior compartment.²

Figure 5 Image showing the piriformis fossa in line with the femoral canal in both anteroposterior and lateral planes

In the described technique, the rasp is inserted into the piriformis fossa before the neck is cut, encouraging a posterolateral entry point in line with the canal. The piriformis fossa is in line with the femoral canal in both planes (Fig 5). We believe this technique improves the accuracy of femoral neck osteotomy and the positioning of the component in the medullary canal of the femur.

References

1. Colegate-Stone TJ, Hussain S. Iatrogenic sciatic nerve palsy following hemiarthroplasty of the hip. *Eur J Trauma Emerg Surg* 2008; **34**: 171–172.

Microsurgical i-Trainer: a low cost method to replicate a microscope

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Microsurgical training is fundamental to training in plastic and reconstructive surgery. Innovative methods are required that are simple, accessible and cheap to replicate intraoperative experience as well as enable practice in this technically demanding activity. Prior to embarking on loupes-only microsurgery, it has been suggested that intensive training under the microscope is essential.¹ This simple method provides medical students and junior trainees without loupes to practise operative skills before dedicating themselves to ownership of loupes.

We suggest downloading an application that uses the zoom function on Apple's iPad® (5 megapixel lens with autofocus), and mounting the iPad® onto a wooden frame to replicate loupes and a microscope. Applications such as 'Camera Zoom' (available for free from iTunes®) allow up to 4x magnification (Fig 1). Operative footage can be recorded at the same time in high definition (1080p), consisting of up to 30 frames per second with audio. Footage can be reviewed later with senior colleagues as a teaching opportunity.

References

1. Pieptu D, Luchian S. Loupes-only microsurgery. *Microsurgery* 2003; **23**: 181–188.

Figure 1 Using iPad® at 3x zoom: anastomosing two ends of a fine straw with a 7/0 Prolene® suture