False aneurysm caused by failed fracture fixation

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INTRODUCTION

Profunda femoris artery pseudoaneursyms are rare complications of fracture of the femoral neck or to operative repair of the fracture (Dameron, 1964; Fordyce, 1968; Wolfgang et al, 1974; Fernandez Gonzalez et al, 1995).

False aneurysms have a complete defect of part of the vessel wall. The wall of the false aneurysm is made of the surrounding tissues and the haematoma. They most commonly present as a lump several days after the fracture or operation. In this case report, the authors describe a case associated with failure of a sliding hip screw.

DISCUSSION

Pseudoaneurysms of the profunda femoris artery have been described as rare complications of femoral neck fractures (Dameron, 1964) and operative fixation (Fordyce, 1968; Fernandez Gonzalez et al, 1995; Entwisle et al, 2001).

This case describes a pseudoaneurysm associated with failure of a sliding hip screw. The mechanism of pseudoaneurysm may be caused by fragments of bone traumatizing the artery which is well described in war injuries (Loubeau and Bahnson, 1977) or to components of the implant causing trauma (Entwisle et al, 2001). Revision of the sliding hip screw was delayed because of the aneurysm and operative repair of the aneurysm was considered to be high risk. Radiological intervention with coils was effective (Entwisle et al, 2001).

This case demonstrates that profunda femoris pseudoaneurysm is a complication of failure of a sliding hip screw, but can be successfully treated in high risk patients with transcatheter embolization. HM

Dameron TB (1964) False aneurysm of the femoral profundus artery resulting from internal-fixation device (screw). *J Bone Joint Surg* **46**: 566–80

Entwisle JJ, De Nunzio M, Hinwood D (2001) Transcatheter embolization of pseudoaneurysm of the profunda femoris artery complicating fracture of the femoral neck. *Clin Radiol* **56**(5): 424–7

Fernandez Gonzalez J, Terriza MD, Cabada T, Garcia-Arauyo C (1995) False aneurysm of the femoral artery as a late complication of an intertrochanteric fracture. A case report. *Orthopaed* **19**: 187–9

Fordyce A (1968) False aneurysm of the profunda femoris following nail and plate fixation of an intertrochanteric fracture. Report of a case. *J Bone Joint Surg* **50**(1): 141–3

Loubeau J-M, Bahnson HT (1977) Traumatic false

CASE REPORT

Patient JL was an 83-year-old man who suffered an unstable intertrochanteric fracture of the femoral neck reduced and fixed with a sliding hip screw. Over the following 2 months he developed pain in the right groin which prevented him from walking. A pulsatile mass in the right groin was found. A pelvic radiograph demonstrated that the plate had pulled away from the femur thus failing to maintain reduction of the fractured hip (*Figure 1*). Ultrasound and then arteriography confirmed the presence of a profunda femoris pseudoaneurysm. The profunda femoris artery was patent and compressed from below by a large pseudoaneurysm (3.2 cm by 4.0 cm in cross section and 5.0 cm in length) (Figures 2, 3 and 4)). The proximal end was 5.0 cm from the origin of the profunda femoris artery. Radiological intervention was considered to be the most appropriate option because of the technical difficulty and high risk of open surgery.

Left common femoral artery puncture with use of an up and over technique to reach the right common femoral artery and right profunda femoris artery was used. The neck of the pseudoaneurysm was isolated and embolization achieved by placing coils distal and proximal to the neck using seven coils in total. Post-embolization arteriography showed no filling of the pseudoaneurysm and good collateral supply of the limb. The lump in the groin became non-expansile and gradually reduced in size. The patient made a good recovery from the procedure and revision of the sliding hip screw was now possible.

Figure 1. Lateral hip view of failed sliding hip screw.

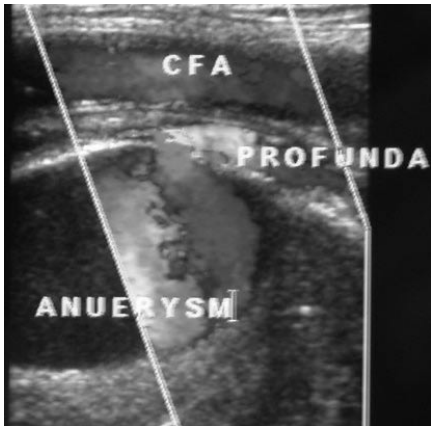

Figure 2. Ultrasound scan confirming diagnosis of profunda femoris pseudoaneurysm.

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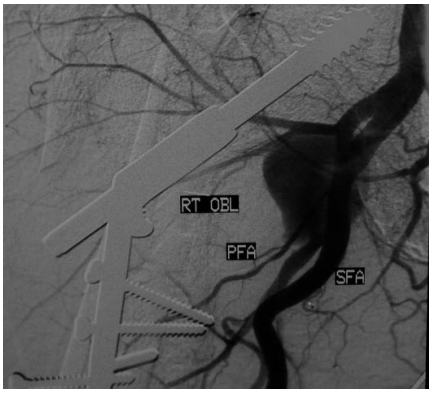

Figure 3. Arteriogram showing pseudoaneurysm.

aneurysm and arteriovenous fistula of the profunda femoris artery: Surgical management and review of the literature. *Surgery* **81**(2): 222–7
Wolfgang GL, Barnes WT, Hendricks GL (1974)

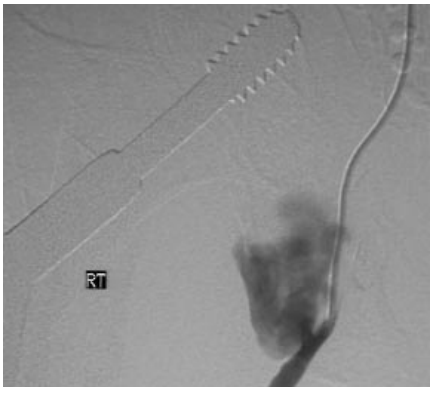

Figure 4. Isolating the neck of the aneursym.

False aneurysm of profunda femoris artery resulting from nail-plate fixation of intertrochanteric fracture. *Clin Orthop relat Res* **100:** 143–50

Figure 5. Post-embolization arteriogram.

In the Public's View...

MMR: they cannot understand

Andrew Wakefield et al's infamous *Lancet* paper was published in 1998. I wrote at the time about the mother of an autistic child who was asked why medical opinion reckoned that the mumps measles and rubella (MMR) vaccine was safe. Her answer: 'I really don't understand.'

I think that mother was Rosemary Kessick, who appeared in Horizon, 'Does the MMR jab cause autism?' (BBC2, 29 May 2005). The science has moved on. Sadly, Kessick has not. Her original idea that MMR triggered her son's autism was a hypothesis worth pursuing. Nothing published and substantiated since then supports the hypothesis, but Kessick's reactions to how the story developed show just how difficult it is to get science across to the ignorant – a term I use non-judgmentally.

Ushered in by portentous trailers for a week beforehand, and promising an 'investigation into new scientific research', Horizon was a let-down. The only new research has not yet been published – a serious weakness of the programme considering Wakefield's tendency to counter every argument against his hypothesis with unpublished findings. If the conclusions of the new research are as reported, it will provide what the MMR-dissenters have been asking for. As the epidemiological evidence against Andrew Wakefield's hypothesis built up, the dissenters adopted the strategy of rejecting epidemiology. Nothing can be learned, they said, unless you look at the children. Timothy Buie, a Boston paediatrician with an interest in autism, has looked at the children's colons and found no evidence. The new research, looking for measles virus in their blood, is apparently even more conclusive.

But Kessick starts by knowing that MMR causes autism. Of the epidemiology she said, 'Now, to me that's statistics. Now, statistics either turn you on or they don't. I don't have time for statistics when I see a sick child in front of me.' No, Mrs Kessick. Whether you like statistics or not, they still have meaning for you, for your child, for all of us. But it is a difficult step to take; to realize that our own experiences are simply not sufficient to explain the world around us.

Mike Fitzpatrick, seen playing with his autistic child in the opening section of Horizon, is a GP and the contrast between Kessick's reaction and his shows an unbridgeable gulf. He was worried about Wakefield's theory, but could see the flaws from the start. He has written a comprehensive book about the episode, and has been much vilified by the MMR-dissenters.

The debate is over, which is why the programme fell so flat. Andrew Wakefield seemed to appear on Horizon only in snippets from previous BBC programmes, so no one challenged him. There is little point in having a meeting between Kessick and Fitzpatrick. We just have to hope that the MMR 'controversy' fades from public view, because the MMR-dissenters are not amenable to evidence or argument, as witness the *British Medical Journal's* Rapid Responses, which, on the subject of MMR, have long been abandoned by all but the deluded, the devious and the distraught.

Rosemary Kessick asked for 'clinical scientific research. Forget the epidemiology: look at the children. Look at the samples down the microscope. Look at the science.' Horizon gave her the science. To which she said, 'I can't see how any study could prove that the MMR hasn't caused the regressive autism that we're seeing in the children. Not with the stack of evidence that we have – and we do have a stack of evidence.' The stack of evidence is people like her: no controls, no comparisons. The interviewer prompted her: 'As far as you're concerned, the case is 100% proven?'

There was no hesitation in Kessick's answer, 'Yes.' An unbridgeable gulf. HM

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