## The impact of defensive medicine on patients, doctors and radiologists

***Sir,***

The practice of defensive medicine has reached new heights, thanks largely to the rising number of medical malpractice lawsuits. While every department in the hospital is affected by this practice, radiological departments seem to be the worst hit (Baicker et al, 2007).

In order to avoid being sued, doctors order tests involving high radiation doses, such as computed tomography scans, to rule out extremely remote possibilities. Apart from the radiation dose, the contrast agents used for computed tomography can produce serious side effects in numerous organ systems (Reddan and Fishman, 2008).

Then, there is the issue of patients becoming victims of imaging. An unnecessary imaging test may reveal an incidental finding, which is then followed up by a series of further imaging tests. Not only does this increase the cost to NHS, but also tremendously increases the patient's anxiety, which is often underestimated. Further, the increased workload on radiologists arising from such practices can only lead to an increase in errors, a sure way of inviting malpractice lawsuits.

Clinicians may become liable to malpractice lawsuits when diagnoses are missed. There are no simple answers. However, discussing cases with the radiologist may help to avoid unnecessary tests. Another useful resource is the publication *Making the Best Use of Clinical Radiology Services* (Royal College of Radiologists, 2007).

Finally, ask the patient if they really want the test, after explaining the test, risks, benefits and the possible outcomes. A 90-year-old woman with congestive heart failure may not want to undergo a stressful barium enema test simply to find out whether or not her constipation is caused by an untreatable bowel cancer, even if the treating clinician may think otherwise.

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Baicker K, Fisher ES, Chandra A (2007) Malpractice liability costs and the practice of medicine in the Medicare program. *Health Aff (Millwood)* **26**(3): 841–52

Reddan D, Fishman EK (2008) Radiologists' knowledge and perceptions of the impact of contrast-induced nephropathy and its risk factors when performing computed tomography examinations: A survey of European radiologists. *Eur J Radiol* **66**(2): 235–45

Royal College of Radiologists (2007) *Making the Best Use of Clinical Radiology Services.* 6th edn. Royal College of Radiologists, London

## Chronic swelling near a synthetic arterial bypass graft

***Sir,***

When a patient presents with a subacute or chronic swelling related to a synthetic arterial bypass graft several months after the operation, it is often infective in nature. Sometimes these are mistaken for haematomas because of the absence of inflammatory signs and lack of a systemic response, as illustrated in these examples.

An 84-year-old woman presented with a 2-day history of painful swelling in her right groin. She had undergone an aorto-bifemoral bypass for aortoiliac occlusion 14 years previously. She was not taking any medications. She was apyrexial, tachycardic (heart rate was 106 beats per minute) and hypotensive (90/60 mmHg). Her abdomen was soft. There was a non-pulsatile swelling in the right groin above the inguinal ligament of 15x10 cm which was slightly tender, fluctuant and transillumination negative. Both lower limbs were pink and viable. Her initial haemoglobin was 9 g/dl and the rest of her blood tests were within normal limits.

She was diagnosed as having detachment of the right limb of the aorto-bifemoral graft. She initially refused an operation but changed her mind when she realized that a simple repair of the right groin graft would mean that she could go home soon. During the surgery, the swelling was found to be an abscess. The bypass graft was removed and bilateral axillo-femoral bypass was performed. She developed multiorgan failure and ultimately died as a result of it.

A 64-year-old man presented with a 1-year history of painless swelling in his left thigh. His medical history included a femoropopliteal bypass graft 5 years before for superficial femoral artery occlusion and atrial fibrillation for which he was taking warfarin.

He was apyrexial, and observations were normal for his age. Examination showed a deep-seated ill-defined lump in the left mid thigh, which was 10x8 cm and slightly tender. His blood tests were normal. Arterial duplex showed that there was no flow in the swelling and a patent Teflon graft. Because he was taking anticoagulation and was in reasonable health, it was thought to be a haematoma. The lump was explored and found to be a well walled-off abscess. The culture was negative. The abscess wall was excised, and the graft left alone. The patient recovered completely.

The incidence of prosthetic graft infection varies between 1 and 6% (Seeger, 2000). These cases emphasize that any swelling related to a synthetic graft is an abscess unless proven otherwise. Patients should be warned about the possible need for graft removal during the operation. Infected prosthetics are associated with serious morbidity, limb loss and mortality (Chiesa et al, 2002).

Graft replacement with antibiotic-impregnated prosthetics appears suitable when the infecting organism is low-virulence *Staphylococcus epidermidis*; other options are replacing grafts with a cryopreserved allograft (Reber et al, 1999) or an autogenous femoral vein in-situ graft (Wilson, 2001). Cryopreserved allografts maintain structural integrity and are resistant to recurrent infection. Patients with infrapopliteal artery graft infections have higher amputation rates than those with more proximal infected peripheral grafts (Calligaro et al, 1996).

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Calligaro KD, Veith FJ, Dougherty MJ, DeLaurentis DA (1996) Management and outcome of infrapopliteal arterial graft infections with distal graft involvement. *Am J Surg* **172**(2): 178–80

Chiesa R, Astore D, Frigerio S et al (2002) Vascular prosthetic graft infection: epidemiology, bacteriology, pathogenesis and treatment. *Acta Chir Belg* **102**(4): 238–47

Reber PU, Stauffer E, Kipfer B, Kniemeyer HW (1999) [Cryopreserved arterial homografts. A treatment alternative for infected vascular reconstructions]. *Zentralbl Chir* **124**(6): 530–4

Seeger JM (2000) Management of patients with prosthetic vascular graft infection. *Am Surg* **66**(2): 166–77

Wilson SE (2001) New alternatives in management of the infected vascular prosthesis. *Surg Infect (Larchmt)* **2**(2): 171–5; discussion 175–7