

Case Report

An 83-year-old woman was admitted to hospital with a fracture of the neck of the right femur. Before admission she was being treated for arthritis with the following: Safapryn six tablets, phenylbutazone 300 mg, ampicillin 1 g, and ethylestrenol 2 mg daily and nitrazepam 5 mg nightly. These drugs were continued throughout her stay in hospital. An Austin-Moore prosthesis was inserted at operation on the right hip. She was recovering satisfactorily until her general condition unexpectedly deteriorated 22 days after admission and she died 24 hours later.

Necropsy showed peritonitis arising from three acute perforations of the stomach. The largest, 1 cm in diameter, was in the greater curvature. The others were in the anterior and posterior walls of the pylorus. There was no pyloric stenosis. The stomach and intestines contained altered blood. There were 67 tablets in the stomach. The mucosa of the greater curvature around the perforation showed multiple erosions, apparently where tablets were in contact with the mucosa (see fig.). The heart, lungs, and liver appeared normal. The tablets were all enteric-coated aspirin identical to the inner core of Safapryn. Free aspirin was not found in a sample of stomach contents. Post-mortem blood contained 1.03 mmol/l (156 µg/ml) of paracetamol, and 363 µmol/l (50 µg/ml) of salicylate. No other drugs were detected in the blood or stomach contents.

Discussion

An overdose of Safapryn tablets was taken, from which paracetamol was absorbed but little aspirin was released. Nevertheless, the local concentration of mucosal irritants at sites in contact with tablets seems to be important,¹ and the gastric erosions suggest that local release of aspirin from some tablets may have caused the ulceration. We should be aware that enteric-coated aspirin does not ensure safety from gastric toxicity.

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¹ Heffernan, S. J., and Murphy, J. J., *British Medical Journal*, 1975, 2, 746.

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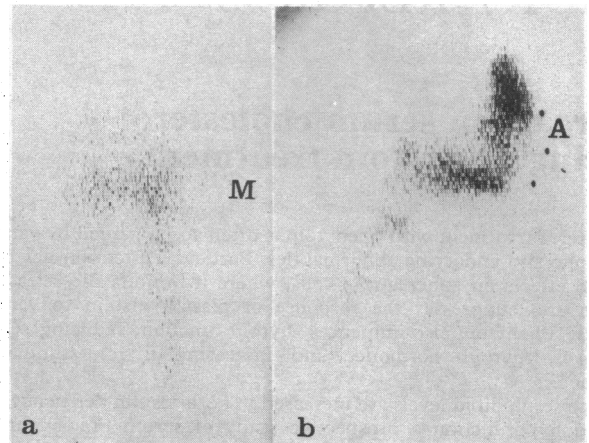
Arthroscintigraphy with technetium albumin in diagnosis of pseudophlebitis (Baker's) cyst

The differential diagnosis of an acute or subacute tender swelling in the calf or popliteal fossa includes thrombophlebitis, dissecting popliteal (Baker's) cyst, gastrocnemius tear, benign neoplasms, and aneurysm. The most difficult and most common differential diagnosis is between thrombophlebitis and dissecting popliteal cyst. We evaluated a simple benign procedure—arthroscintigraphy, using an intra-articular injection of high specific activity ^{99m}Tc labelled human serum albumin (H.S.A.)—to confirm or refute the diagnosis.

Patients, methods, and results

Sixteen patients were studied. Under aseptic conditions 3-5 mCi of ^{99m}Tc-H.S.A. in 1-1.5 ml was injected intra-articularly into the affected knee joint. At three and 24 hours the leg was imaged from six inches above the injection site to the ankle, using a five-inch (13 cm) crystal rectilinear scanner.

The arthroscintigram showed dissection or rupture of a cyst in six patients. Eight of the patients had venography and four were shown to have venous thrombosis; in all of these four patients the arthroscintigram was normal. Five patients underwent arthrography. In one patient with a normal arthrogram the arthroscintigram showed an abnormal large popliteal cyst (see fig.). The six patients with positive scans included three with symptoms related to athletic activity, two with spontaneous onset of symptoms, and one in whom symptoms were associated with prior rheumatoid arthritis. Because of the strong clinical suspicion of acute thrombophlebitis seven of these patients had been started on heparin one to six days before the scanning procedure.



Arthroscintigrams of left knee showing entrance of tracer posteriorly into popliteal cyst and extending downwards to middle of calf region; this was diagnostic of dissection or rupture of Baker's cyst. (a) Posterior view. (b) Lateral view. A. = Anterior. M. = Medial.

Discussion

In 1877 Baker¹ described the cyst that bears his name. About 40% of normal knees have a valvular opening in the posterior capsule resulting in a communication between the knee joint and the normal bursa situated anterior to the medial head of the gastrocnemius muscle.² This communication is generally narrow and the valve mechanism allows free passage of fluid from the knee joint to the popliteal bursa, but not in the reverse direction.

Though specific, arthrography using gas or opaque contrast media is not without risk. Complications, such as contrast-media hypersensitivity or pain due to subcutaneous infiltration or synovial rupture caused by over-distention of the joint space, occur during a small percentage of examinations. In contrast, arthroscintigraphy using a labelled radiodiagnostic material maintains a high degree of specificity without loss of sensitivity but does not result in these hazards.

The clinical similarity of thrombophlebitis and a dissecting inflamed popliteal cyst is so great that the dissecting cyst has been dubbed as pseudophlebitis. Since the implications of having thrombophlebitis are so grave, however, it is essential to establish the diagnosis definitely; thus unnecessary exposure to anticoagulants of patients with pseudophlebitis may be prevented. The diagnosis of a dissecting popliteal cyst should be considered in a patient with an apparent positive Homan's sign and associated swelling of the popliteal fossa with swelling of the calf, particularly if the calf swelling is predominantly medial and no palpable firm vein ("cord") is present.

Recently, several reports have described the clinical usefulness of radionuclide arthrography after the intra-articular injection of ¹³¹I-H.S.A.^{3,4} But the preferable physical characteristics of ^{99m}Tc (140-keV photon emission, six-hour physical half life, and decreased adsorbed radiation dose) make this nuclide a much more desirable radiolabel. Because of these features, millicurie rather than microcurie quantities can be used and, thus, much better resolution images are obtained.

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¹ Baker, W. M., *St. Bartholomew's Hospital Reports*, 1877, 13, 245.

² Taylor, A. R., and Rana, N. A., *Annals of the Rheumatic Diseases*, 1973, 32, 419.

³ Pozderas, R. V., and Good, A. E., *Journal of Nuclear Medicine*, 1974, 15, 7.

⁴ Schmidt, M. C., Workman, J. B., and Barth, W. F., *Archives of Internal Medicine*, 1974, 134, 694.

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