BRIEF REPORTS

***MYCOBACTERIUM BOVIS* INFECTION OF A TOTAL HIP ARTHROPLASTY: A CASE REPORT**

W. J. LEACH, D. S. HALPIN

We report an unusual case of deep infection of a total hip arthroplasty by *Mycobacterium bovis*.

Case report. An 84-year-old woman gave a nine-month history of discomfort in the right buttock, radiating down the back of the thigh and made worse on moving the hip. An Exeter hip arthroplasty for primary osteoarthritis had been asymptomatic for seven years and there was nothing else of note in her medical history, in particular no record of exposure to tuberculosis. The initial radiograph showed

an apparently sound arthroplasty (Fig. 1), with no evidence of loosening of either component. An area of tenderness at the greater trochanter was injected with hydrocortisone, but this did not alleviate her symptoms.

Six months later a fluctuant swelling had developed over the greater trochanter, and aspiration yielded a purulent yellow fluid. Gram staining of this showed numerous polymorphs but no organisms and routine culture was sterile. The full blood count was normal, the

Fig. 1

Fig. 2

W. J. Leach, FRCS Ed, Fellow in Sports Traumatology
Department of Sports Medicine, The Royal London Hospital, 1st Floor,
Fielden House, Stepney Way, London E1 1BB, UK.

D. S. Halpin, FRCS, Consultant Orthopaedic Surgeon
Princess Elizabeth Orthopaedic Hospital, Wonford Road, Exeter EX2
4UE, UK.

Correspondence to Mr W. J. Leach.

©1993 British Editorial Society of Bone and Joint Surgery
0301-620X/93/4R73 \$2.00

J Bone Joint Surg [Br] 1993; 75-B:661-2.

Received 18 June 1992; Accepted 24 September 1992

ESR was 20 mm in the first hour, and the C-reactive protein level was 27 mg/dl. A course of oral flucloxacillin was started but there was further collection of fluid.

After more aspirations the hip was explored under general anaesthesia. There was a large amount of purulent fluid and inflammatory tissue appeared to arise from the joint itself. Specimens were sent for culture and histological examination. Ziehl-Nielsen staining was positive for acid-fast bacilli but routine culture was sterile. Lowen-

stein-Jensen culture, however, was positive for *Mycobacterium bovis*.

A course of antituberculous chemotherapy using ethambutol and rifampicin was started. Chest and lumbar spine radiographs showed no other foci of infection, but several further collections required aspiration from around the hip. Pain increased and radiographs 16 months after initial presentation showed evidence of loosening of both components (Fig. 2); it was decided to proceed to a Girdlestone arthroplasty.

At operation, both components were loose and thorough debridement of the hip was carried out. There was no evidence of secondary infection, and tissue specimens were sterile on routine culture and on Lowenstein-Jensen culture for *Mycobacterium bovis*.

Discussion. Buchholz et al (1981) and Carbon et al (1981)

each reported two cases of tuberculous infection of hip replacements, but we were able to find no recorded cases of infection by bovine tuberculosis. In our patient we were unable to find any other foci of tuberculous infection, past or present. Treatment with drugs and by surgical excision of the joint appears to have eradicated the infection.

No benefits in any form have been received or will be received from a commercial party related directly or indirectly to the subject of this article.

REFERENCES

- Buchholz HW, Elson RA, Engelbrecht E, et al. Management of deep infection of total hip replacement. *J Bone Joint Surg [Br]* 1981; 63-B:342-53.
- Carbon C, Brion NV, Darcy M, Thomas M, Lamotte-Barrillon S. Tuberculous infection of total hip prosthesis: report on two cases. *Ann Méd Interne* 1981; 132:124-5.

SURGERY FOR CURLY TOE DEFORMITY: A DOUBLE-BLIND, RANDOMISED, PROSPECTIVE TRIAL

A. J. HAMER, D. STANLEY, T. W. D. SMITH

Several operative procedures have been described for the treatment of curly toes in children. It is a relatively common deformity which may be related to intrinsic muscle paresis, although this could not be clearly demonstrated by Taylor (1951). Surgical treatment may be by flexor-to-extensor tendon transfer, as originally described by Girdlestone (Taylor 1951), to overcome the presumed weakness of the intrinsic muscle pull, or by simple flexor tenotomy, for which good results have been reported by Ross and Menelaus (1984).

There have been retrospective studies comparing the two procedures in children and in adults (Pyper 1958; Parrish 1973; Pollard and Morrison 1975) but we are not aware of any double-blind, randomised, prospective trials. We therefore present a four-year follow-up of 46 toes randomised to either flexor tenotomy or flexor-to-extensor tendon transfer.

Patients and methods. We recruited 19 patients requiring surgery for bilateral curly toe deformity after obtaining fully informed consent from their parents. No child had any gross neuromuscular pathology. Each patient had

the same toes affected on both feet and similar degrees of deformity. Those on one foot were allocated at random to receive either a flexor tenotomy or a flexor-to-extensor transfer; the corresponding toe on the other foot then received the other operation. The patients and their parents were not informed which operation was performed on each toe, but they were told that the medical literature indicated that neither was superior.

The technique of flexor-to-extensor transfer was that described by Taylor (1951) and credited to Girdlestone, except that only the long flexor tendon was transferred. We did not use a Lambrinudi splint or plaster cast. A dorsolateral incision was made from the level of the metatarsophalangeal joint to the distal interphalangeal joint. The extensor expansion was exposed, and the long flexor tendon identified, caught in a blunt hook, divided, brought around the lateral aspect of the proximal phalanx, and sutured through the extensor hood by a buttonhole method.

The incision and operative steps were identical for the toes undergoing flexor tenotomy, except that the suturing of the flexor tendon to the extensor expansion was omitted.

After operation all the patients had wool and crepe bandage support for the first few days and were allowed to bear weight as soon as this was possible.

Photographs of the feet were taken with the patient standing. Of the 19 patients, preoperative photographs were available for seven. Postoperatively, 13 patients were reviewed at four years and assessed clinically by one of the authors (AJH), without knowledge of the

A. J. Hamer, FRCS, Registrar in Orthopaedic Surgery
D. Stanley, FRCS, Consultant Orthopaedic Surgeon
T. W. D. Smith, FRCS, Consultant Orthopaedic Surgeon
Department of Orthopaedic Surgery, Children's Hospital, Western Bank, Sheffield S10 2TH, UK.

Correspondence to Mr A. J. Hamer.

©1993 British Editorial Society of Bone and Joint Surgery
0301-620X/93/4R85 \$2.00
J Bone Joint Surg [Br] 1993; 75-B:662-3.
Received 1 December 1992; Accepted 12 January 1993