LEG OEDEMA DUE TO A RHEUMATOID CYST IN THE PELVIS

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We describe a case in which chronic oedema of a leg was due to pressure on the external iliac vein from an intrapelvic rheumatoid cyst. Ultrasound and CT scanning gave the clues to diagnosis.

Oedema of the leg from pressure on the iliac veins may result from a variety of intrapelvic pathologies and may be misdiagnosed as a deep-vein thrombosis (Jennings, Walker and Ward 1988). We report an unusual case in which the veins had been compressed by a rheumatoid cyst in the pelvis.

CASE REPORT

The patient, a nun aged 68 years, was admitted for investigation and treatment of severe rheumatoid arthritis and massive oedema of her left leg. The arthritis was of 15 years' duration and had progressed relentlessly despite intensive medical treatment. The oedema had developed spontaneously three years earlier at which time venography had shown no evidence of peripheral thrombosis, but there was slight narrowing of the femoral vein at the level of the inguinal ligament. At that time the diagnosis was intrapelvic venous thrombosis and she had received a long course of anticoagulant therapy without benefit.

Her previous medical history included, 20 years earlier, a tuberculous abscess of the axilla treated by surgical drainage and chemotherapy and 25 years previously, uterine carcinoma which had necessitated a hysterectomy followed by radiotherapy. During her course of anticoagulant therapy she had developed haematuria due to telangiectasis of the bladder mucosa secondary to the radiotherapy.

The patient was moderately overweight (75 kg) and confined to bed mainly because of arthritis of all her limb joints, particularly of the left hip, which showed extensive erosion of the femoral head and protrusio acetabuli (Fig. 1). Venography was impossible because oedema obscured the leg veins. Duplex ultrasonography of the deep veins of the left thigh demonstrated slowed blood flow that did not vary with respiration. This is consistent with obstruction of the pelvic veins. A CT scan of the pelvis revealed a round structure, 6 cm in diameter, of soft-tissue density and with well-defined partially calcified margins. It lay adjacent to the medial surface of the iliac bone at the level of the floor of the acetabulum, displacing the external iliac vessels medially and the iliopsoas muscle anteriorly (Fig. 2).

Aspiration yielded a small amount of viscous fluid and no communication with the hip was seen on injection of water-soluble contrast medium (Fig. 3). The close location of the cyst to the diseased joint implied, however, that the two conditions were linked and a rheumatoid cyst was the likely diagnosis despite the unusual situation. The possibility of an iliopsoas abscess was indicated by the past history of tuberculosis and the severe destruction

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of the hip which was compatible with tuberculosis superimposed on rheumatoid arthritis. Radiographs of
the lumbar spine showed no tuberculous focus.

Under anaesthesia the mass could be felt in the left
iliac fossa. It was exposed extraperitoneally through an
incision above the inguinal ligament which revealed a
thick-walled cyst, the size of a tennis ball, with the iliacus
muscle thinly stretched over it. The external iliac vessels
were compressed on its medial aspect. A large amount of
fibrinous yellow fluid was evacuated from the cyst which
extended into the thigh distal to the inguinal ligament;
pressure over the femoral triangle produced a further
large amount of fluid. Its lateral wall was formed by the
floor of the acetabulum but no direct communication
with the joint cavity could be demonstrated.

During the 24 hours after evacuation of the cyst the
patient had a brisk diuresis and the leg oedema subsided
rapidly. Anti-tuberculous therapy was begun but was
discontinued when cultures proved sterile. The histology
of the cyst wall was consistent with rheumatoid arthritis.
No granulomata or mycobacteria were identified. Six
months later, a hip arthroplasty was performed, with
reinforcement and bone grafting of the deficient acetabular
floor. This gave relief of pain and some improve-
ment in mobility but the patient continued to be greatly
handicapped by arthritis in her other joints.

DISCUSSION

Since it had no demonstrable communication with the
joint through the floor of the acetabulum the cyst was
probably an intrapelvic extension of a distended iliopsoas
bursa. This bursa communicates with the hip in 14% of
individuals (Chandler 1934) and its involvement in
chronic hip disease has been reported in rheumatoid
arthritis (Coventry, Polley and Weiner 1959; Melamed,
Bauer and Johnson 1967), osteoarthritis (Warren, Kaye
and Salvati 1975), villonodular synovitis (Carr, Berley
and Davies 1954), synovial chondromatosis (Eisenberg
and Johnston 1972) and septic arthritis (Steinbach et al
1985). Usually, the bursal distension remains below the
inguinal ligament as a palpable swelling which may be
mistaken for hernia, aneurysm, lymphadenopathy, psoas
abscess or tumour. When it tracks along the sheath of
the iliopsoas muscle to lie within the pelvis, as in this case, it
is less easy to detect especially in an obese patient. The
diagnosis is further complicated by the varied clinical
presentation which depends on the extent to which the
cyst encroaches upon intrapelvic structures. Involvement
of the bladder (Watson and Ochsner 1967) and the bowel
(Melamed et al 1967) has been reported. The last authors
also reported a similar case to ours in which leg oedema
resulted from pressure on the external iliac vein and
Coventry et al (1959) described oedema from compression
of the femoral vein by a distended iliopsoas bursa below
the inguinal ligament. In our patient the diagnosis was
delayed for several years until ultrasonography and CT
scanning gave the clue. A recent paper by Pritchard et al
(1990) confirms the value of these methods in this
condition and pelvic scanning is clearly indicated in the
investigation of unexplained chronic oedema of the leg.

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REFERENCES


