A primary hydatid cyst in the pelvis is rare, and usually presents with pressure symptoms affecting the adjacent abdominal organs. We describe such a cyst which protruded through the sciatic notch and presented as a gluteal swelling with a foot drop due to compression of the lumbosacral nerve roots. Surgical excision and postoperative treatment with albendazole for six weeks were effective in controlling the disease and preventing recurrence.

Hydatid disease is widely prevalent and is caused by *Echinococcus granulosus*. It is transmitted by the ingestion of eggs and commonly involves the liver (80%) and lung (15%) although any part of the body may be affected. We describe a case of a primary intrapelvic hydatid cyst presenting with a foot drop. So far all previous cases which have been described with a neurological deficit have been cysts of the vertebral column compressing the spinal cord or the cauda equina.

**Case report**

A 24-year-old woman presented with a painless swelling over the right gluteal region, which had progressively increased in size over six months. Numbness and weakness involving the right leg had been present for four days. There was no associated fever, loss of appetite, backache or history of tuberculosis. Local examination showed a cystic, non-tender swelling of about 4 cm in diameter in the right gluteal region, lying deep to gluteus maximus, and which was palpable in the right fornix on vaginal examination. A fluid thrill was present between the two sites. No swelling or mass could be felt in the abdomen and there was no spinal tenderness or deformity. Neurological examination showed weakness of the hip extensors and abductors (2/5), the hamstrings (2/5), and the muscles of the ankle and foot (0/5) on the right side as measured on the MRC scale. There was diminished sensation in the distribution of the L5, S1 and S2 roots on the affected side along with perianal anaesthesia.

The clinical diagnosis was that of a benign tumour. Possibilities considered were a cystic neuroma arising from the sciatic nerve or the lumbosacral plexus, a sacral teratoma, or a hydatid cyst compressing the lumbosacral roots. The plain radiograph did not show any abnormality except for doubtful enlargement of the right sciatic notch. Ultrasonography of the abdomen revealed a large (10.7 × 5.6 cm) hypoechoic mass with echogenic septations in the presacral area posterolateral to the uterus and extending into the right gluteal region. Both kidneys and the urinary bladder appeared normal. MRI revealed a large cystic mass in the right pelvis, with well-defined walls, situated posterior to the bladder and extending to the gluteal region through the greater sciatic notch (Fig. 1a). Aspiration of the swelling yielded approximately 15 ml of clear to straw-coloured fluid. Smear and cytospin preparation from the fluid showed acellular material with no evidence of any atypical cells or parasites. No acid-fast bacilli could be visualised in the smears. A further MRI about two weeks after the aspiration showed the cystic mass to be of similar dimensions, but with collapse of the inner wall (Fig. 1b). Intravenous pyelography demonstrated both kidneys to be functioning normally, with no pressure effects.

The Casoni and indirect haemagglutination (IHA) tests were negative. Radiological examination of the chest was normal. We performed a laparotomy through a right paramedian incision on the presumptive diagnosis of hydatid cyst. A dumb-bell-shaped retroperitoneal cystic mass was found occupying the hollow of the sacrum and extending through the greater sciatic notch to the gluteal region, causing severe stretching of the lower lumbar and sacral nerve roots adherent to the wall of the cyst. After carefully dissecting the nerve roots, the cyst was mobilised and aspirated. Povidone iodine was then injected into the cyst.
and its wall opened. The germinal layer or the endocysts were removed completely and as much of the ectocyst as possible. The cyst and the surgical field were washed with hypertonic saline and povidone iodine solution. Postoperatively, the patient was given albendazole for six weeks.

Histological examination confirmed the diagnosis of a hydatid cyst and MRI after operation indicated that it had been completely removed. The patient, when last seen at nine months after operation, had considerable neurological recovery with the hip extensors and abductors and the hamstrings showing power of 4/5. The ankle and foot muscles, however, failed to show any clinical recovery. There was no evidence of any secondary seeding.

Discussion

Man is an accidental host in the life cycle of *Echinococcus granulosus*. Human infestation occurs when the ova are swallowed. The outer protective coat of the ovum is digested in the stomach and the liberated larvae penetrate the mucosa of the proximal bowel to enter the portal system and to spread to various organs.\(^1\) Rarely, spread may occur by the lymphatic system of the bowel wall or, alternatively, by the venous circulation when the parasite has passed the liver and lungs.\(^2\) Cysts are found in the liver (55% to 60%), lungs (30%), kidneys (2.5%), heart (2.5%), bones (2%), muscles (1%), brain (0.5%) and in other organs such as the spleen (1.5%).\(^3\) Other rare sites include the omentum, ovaries, parametrium, pelvis,\(^4,5\) thyroid, orbit or retroperitoneum.\(^6\)

In man, infection is usually acquired in childhood. The symptoms present several years after exposure and it may take five to 20 years before a diagnosis is made. Of 532 cases of echinococcosis reviewed in Lebanon, 12 were of pelvic hydatid disease.\(^7\) Of the 51 cases of hydatid disease reported in Kuwait between 1955 and 1960, only one was located in the pelvis.\(^8\) Primary pelvic hydatid disease originates in the connective tissue immediately beneath the peritoneum of the pouch of Douglas. It spreads to the uterus, ovaries, Fallopian tubes, bladder and rectum after contact. Nearly all the cases described as developing from the ovary or Fallopian tubes are really invasions from the broad ligament.\(^9\) Our case, with swelling in the gluteal region and symptoms of nerve compression in the form of foot drop, is unique. No such case of primary pelvic hydatid cyst leading to a neurological deficit has ever been reported.

It is of the utmost importance that a correct preoperative diagnosis is made since all precautions must be taken to prevent dissemination and seeding of the surgical field. Deaths have been reported due to anaphylactic shock resulting from spillage during excision or biopsy after a mistaken diagnosis of a retroperitoneal tumour. In endemic regions, because of the diversity of its presentation the possibility of hydatid disease should always be borne in mind for any growing mass in the body. Diagnostic techniques such as radiography, ultrasonography, CT, MRI, and immunological tests are of value. Comparison of the Casoni and IHA tests suggests that the former is unreliable.\(^10,11\)

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


Fig. 1a

MRI of the pelvis showing a) a large dumb-bell-shaped cystic mass extending into the gluteal region through the greater sciatic notch on the right side with well-defined walls and b) two weeks after aspiration with the collapsed wall or endocyst.

Fig. 1b


