Iliac aneurysms

Internal Iliac aneurysms are rare. One third of patients complain of pain radiating down the leg.¹ Differentiation from pain due to a lumbar disc herniation is difficult and the incidence of disc disease is much higher. CT scanning of the lumbosacral plexus makes the diagnosis considerably easier and avoids unnecessary operations and invasive investigations.

A 74 year old male was admitted on 7 October 1988 with a ten day history of irradiating pain in the left lateral thigh. He had no sensory, motor or micturition difficulties. On examination, straight leg raising was reduced as were the tendon reflexes in the left leg. The interpretation of these findings was difficult due to severe pain.

In May 1988 he presented with signs of a ruptured aortic aneurysm and a trouser graft was inserted end-to-end to the aorta and external iliac arteries. The origin of the left internal iliac artery which was also aneurysmal was ligated. Plain radiographs of the lumbar spine and CT scans of L3-4, L4-5 and L5-S1 were normal, but a pelvic scan showed the aneurysm, with a diameter of 5 cm, in the region of the plexus. There were no signs of bleeding. The patient was operated on the 13 October. An aneurysm containing old blood was found with an arterial feeder. The aneurysm was resected. After the operation the irradiating pain in the left leg was less than before, but the patient had a drop foot. A new CT scan showed a haematoma at the site of the aneurysm, which was contiguous with the lumbosacral plexus (figure). In the course of the next few months the pain disappeared and the drop foot improved considerably. Half a year later the patient died from a malignant tumour of the stomach, unfortunately without necropsy.

After exclusion of the more common causes of radicular pain a CT scan of the pelvis established the diagnosis which was confirmed by operation and the postoperative clinical course. Vock *et al*² published in this journal a study on the correlation between the anatomy and CT scanning of the pelvis. The postoperative CT scan showed a haematoma exactly at the expected place of the lumbosacral plexus, corresponding with the drop foot of our patient.

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Figure The CT scan shows compression of the lumbosacral plexus at the anterior border of S1 by a haematoma. On the right the intact plexus is visible. The white arrows point to the lumbosacral plexus.

"Disconnected" integral ventriculo-peritoneal shunt systems

Patients with hydrocephalus treated with a shunt system frequently attend hospital with symptoms which may be the result of valve dysfunction. It is usual practice to take radiographs of the shunt system, to detect displacement or disconnection. The system most commonly used at Alder Hey Children's Hospital in Liverpool, has been the Paediatric Integral Shunt system incorporating the Hakim mechanism manufactured by Cordis. This system is radio-opaque, apart from the valve chamber itself, and continuity is easily seen on a plain radiograph. We report an anomaly, which was a possible cause of radiographic misdiagnosis.

A three year old child was admitted with a three day history of "not being himself", drowsy and lethargic. He had a Cordis Integral Shunt (ventriculoperitoneal) inserted at the age of three months for posthaemorrhagic hydrocephalus. A radiograph of the shunt system was thought to show a disconnection at the lower border of the valve itself (fig 1).

To assess whether the patient's shunt was not functioning correctly, a Huber needle was inserted aseptically into the reservoir at the end of the ventricular catheter.¹ The intraventricular pressure was raised (180 mm of water), and the column of CSF did not fall when the valve was pumped, suggesting a malfunction of the valve itself or in the tubing distal to the valve chamber. The lower end of

Figure 1 Skull radiograph showing Hakim integral valve system in situ with a reservoir connection to the ventricular catheter and a "disconnection" at the lower end of the valve (↑). It is better seen in the enlargement—inset (A). Inset (B) is an example of the valve system itself, showing the clear tubing connecting the valve to radio-opaque tubing which on a radiograph appears as a "disconnection" (↑).