THE MYELOGRAPHIC APPEARANCE OF SACRAL CYSTS

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(Received for publication September 16, 1955)

The presence of cysts within the sacral spinal canal was first described as an incidental autopsy finding by Tarlov in 1938. More recent reports indicate that these structures may be the cause of pain and neurological disturbances. Since only 16 cases were found in the medical literature, we would like to report our clinical and roentgenographic experience with 4 patients.

During a study of the filum terminale in 30 routine autopsies, Tarlov found 5 cysts attached to the posterior sacral and coccygeal nerves. During life one of these patients had exhibited signs and symptoms referable to the cyst. In 1948 he described a patient with sciatic pain who was cured by removal of a sacral cyst. Although a myelogram had not been done, he felt that it probably would have been negative since the cyst was 1 cm. distal to the origin of the nerve root from the sacral dural sheath and was not in continuity with the subarachnoid space. In a second series of 60 cadavers he found cysts in 8 cases.

In 1950 Weiford described a patient with pain in the sacral area associated with bladder incontinence. At operation, a midline cyst was disclosed arising at the tip of the dural sac in the region of the filum terminale. No communications with the subarachnoid space could be demonstrated although a myelographic examination was not performed.

The first myelographic visualization of a sacral cyst was reported by Schreiber and Haddad in 1951. In their patient a collection of Pantopaque beneath the right upper sacrum and distal to the usual termination of the dural sheath was noted at the time of the myelographic examination. There was also thinning of the bone overlying the cyst. Since then, single case reports of successful myelographic demonstrations of sacral cysts have been described by Taheri et al. and Jacobs et al. Strully and Heiser reported 5 cases including one in which the cyst was not visualized, but produced an extrinsic pressure defect on the column of contrast material.

CASE REPORTS

Case 1. W.V.T., a 38-year-old white female, had complained of low back pain at various intervals for the past 12 years. For several months, she had had severe pain in her right hip radiating down the posterior aspect of the right thigh, and calf to the lateral aspect of the foot.
Examination. Knee jerks and ankle jerks were active and equal. There were no sensory changes. Minimal to moderate pain was produced on the right side by the straight leg raising test. The pain was increased by coughing, sneezing, and straining, and was relieved by lying down. Roentgenograms of the lumbar spine revealed a spondylolisthesis of the 5th lumbar vertebra with minimal forward slipping, and enlargement of the sacral canal in the region of the 2nd sacral segment.

Lumbar myelography was performed and contrast material was seen to fill a small pocket just to the right of the midline at the level of the 2nd sacral segment which was distal to the normal termination of the dural sheath (Fig. 1). This was felt to represent an arachnoid cyst.

Operation. A laminectomy was done. On removing the bone over the right side of the sacrum a bulging cyst, about 4 cm. in diameter, was disclosed which extended below the 2nd sacral segment. It had hollowed out a cavity in the sacrum and was compressing the sacral nerve roots anteriorly. The cyst contained clear fluid plus some residual Pantopaque. It was necessary to take off most of the right half of the upper two sacral segments in order to completely uncover this cyst, which was closely adherent to some of the nerve roots. It was dissected out and traced down to a narrow neck attached to the dural sac at the emergence of the 2nd sacral root. The neck was ligated and the sac was removed. The cyst was considered to be of arachnoidal origin arising near the point of emergence of the 2nd sacral root.

Course. The patient did well postoperatively with complete relief of pain.

Case 2. K.M., a 44-year-old white male, entered the hospital with the chief complaint of back pain of 17 years’ duration. Seventeen years before he had fallen from a cliff and had sustained a back injury that had necessitated confinement to bed for