SPINAL EXTRADURAL CYST

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The purpose of this report is to record another case of spinal extradural cyst. The origin of these cysts is not altogether clear but in general they can be considered as derived from the spinal meninges and may be classified as: (1) parasitic cysts, which have been discussed in some detail by Krauss; (2) teratomatous cysts, which have been described by Adams and Wegner, and the so-called congenital type of cyst of the spinal meninges described by Cloward, Mayfield and Grantham, Elsberg, Dyke and Brewer, and others. In addition, there are the traumatic extradural cysts, usually following operative procedures.

A number of authors have commented upon the fact that spinal extradural cysts are not a common cause of spinal cord or cauda equina compression. Adelstein, however, has reported 17 cases and Turner has reviewed 10 additional cases in which spinal cord compression did occur. Subsequent to Turner's report, Hyndman and Gerber reported 3 cases and Swanson and Fincher reported 3 additional cases of spinal extradural cyst.

REPORT OF CASE

A 31-year-old woman, a presser, was first seen at the Lahey Clinic on Aug. 28, 1947, complaining of paresthesias in the right knee and thigh. About 6 years before entry she began to notice some decrease in sensation in the region of the right knee. More recently she had suffered attacks of pain in this area and in the right hip, brought on particularly by kneeling or bending and frequently lasting 1 or 2 days.

Examination. The patient was well developed and nourished. The lower back was held stiffly and there was voluntary limitation of movement. Actual radiation of pain on movement was not elicited. There was an area of complete anesthesia over the anterior right thigh in the 3rd and 3rd lumbar dermatomes. There was slight quadriiceps atrophy and weakness of extension at the knee. The right knee jerk could not be elicited. Blood Hinton and Wassermann tests were negative. Roentgenograms of the spine showed some reaction about the sacro-iliac joint, more marked on the left. The articular facets at the lumbosacral joint were asymmetrical, with slight scoliosis convex to the left.

On Oct. 27, 1947, pantopaque myelography was carried out. Dynamics were normal; total protein of fluid, 70 mg./100 cc.; Davies-Hinton and Wassermann reactions negative. Fluoroscopy showed the pantopaque flowing freely from the cul-de-sac to the mid dorsal levels. At the level of the 3rd lumbar vertebra on the right there was an extravasation of pantopaque into an area slightly posterior to the main column. The amount of extravasation increased each time the pantopaque was allowed to pass this point and finally measured 1.5 cm. in width and 3 cm. in length (Fig. 1). It was concluded that this lesion was a communicating cyst. Following fluoroscopy all of the pantopaque was removed except that retained in the cyst since this could not be brought down into the cul-de-sac. At the suggestion of the

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radiologist, the patient was allowed to be ambulatory for the next 24 hours in order to observe whether the cyst might empty itself into the general subarachnoid space. On the following day the roentgenogram showed partial emptying of the cyst with accumulation of the pantopaque in the cul-de-sac (Fig. 2).

![Fig. 1 (left). Pantopaque flowing into the extradural cyst during fluoroscopy.](image)

![Fig. 2 (right). Residual pantopaque after 24 hours. A portion of the pantopaque has left the extradural cyst to reaccumulate in the cul-de-sac.](image)

Operation. On Nov. 1, 1947, exploration of the lumbar canal revealed beneath the lamina of the 3rd lumbar vertebra on the right a distended extradural cyst, about the size of a man's thumb, adherent to the dura. The cyst was opened during the process of dissection and was found to contain spinal fluid and material characteristic of pantopaque. It contained probably the 3rd right lumbar root which was adherent to the cyst wall. A silver clip was applied to the narrow neck of the sac and the cyst was removed, following which gelfoam was placed in its bed.

The pathologic microscopic report was cyst with fibrous degenerated walls.

Postoperative Course. The anesthetic area of the right thigh remained unchanged and the right knee jerk again could not be elicited. The wound healed well and the patient was relieved of pain. She was last seen 4 months following operation, at which time she stated that she was entirely free of pain and had no complaints. Sensory changes remained the same and the right knee jerk could not be elicited.
COMMENT

There was no evidence that trauma played any role in this case. The rather long history of sensory changes in the region of the right knee suggests that the cyst was congenital in origin, similar to cases reported by Robertson and Graham, Elsberg, Dyke and Brewer, and Cloward and Bucy. Partial communication of the cyst with the subarachnoid space was present, similar to that noted in the case presented by Good, Adson and Abbott.

In the presence of segmental sensory, motor and reflex changes, such as were present in this case, together with radiographic findings suggestive of an extradural cyst, the diagnosis of such a lesion should be considered as probable. In the patient reported here we believe that the appearance of pain symptoms coincided with distention of the cyst and that periodic subsidence of symptoms occurred when the cyst had been decompressed by drainage into the subarachnoid space.

CONCLUSION

We have presented another case of spinal extradural cyst. In this instance partial communication with the subarachnoid space could be clearly demonstrated by roentgenologic examination.

REFERENCES