INTRAMEDULLARY ARTERIOVENOUS ANEURYSM OF THE SPINAL CORD*

CASE REPORT WITH OPERATIVE REMOVAL FROM THE CONUS MEDULLARIS

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Blood-vessel tumors and malformations within the spinal cord are rare. To the best of the writer's knowledge, no operative report has been made yet of an intramedullary removal of such malformations. Presentation is made here of a case of an arteriovenous aneurysm lying within and around the conus medullaris with successful and probably complete surgical extirpation, undertaken not by choice but of necessity.

A review of the literature by Cobb in 1915, Globus and Doshay in 1929, and Turner and Kernohan in 1941 yielded 18 telangiectatic and angiomatous malformations, 24 venous dilations and 28 blood-vessel tumors lying in or around the spinal cord. Only 1 venous and 1 arteriovenous angioma lay within the spinal cord. Wyburn-Mason in a superb monograph in 1943 collected from the literature 16 cases of arteriovenous angioma in or around the cord and added 16 cases of his own. Operation was performed in 13 cases with improvement in only 2 (Case 24 of Wyburn-Mason and that of Echols and Holcombe). The nomenclature is confusing with much overlapping and the terms angioma and aneurysm are used interchangeably in descriptions of arteriovenous malformations.

CASE REPORT

J.V.W., a 14-year-old boy, was admitted July 1941 to the Hartford Hospital on the orthopedic service of Dr. Sidney McPherson because of progressive low back pain radiating down

Fig. 1. X-ray of dorsolumbar spine to show widening of interpedicular space, erosion of 12th dorsal pedicle and fleck of calcium in old hemorrhagic angiomatous cyst within the conus medullaris.

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both posterior thighs, which had been present over a 3-year period, and was accompanied by occasional difficulty with micturition and more recently by diffuse weakness of his legs. Examination was essentially negative except for diminished left knee and ankle jerks, fibrillary twitchings in his posterior thighs and calves, and meningismus. Laboratory studies revealed a fusiform widening of the interpedicular space from the 11th dorsal through the 2nd lumbar vertebrae with a marked widening of the 12th dorsal and 1st lumbar space as well as almost complete pressure erosion of the 12th dorsal pedicle on the right (Fig. 1). A faint calcareous deposit was noted within the canal at the mid 12th dorsal vertebral level (old intramedullary hemorrhage, see Fig. 3). An oxygen spinogram in the upright position revealed a complete block at this same level. Spinal puncture yielded a partial block in dynamics with an increased spinal fluid protein of 157 mg. per cent. A preoperative diagnosis was made of an intramedullary spinal cord tumor involving the conus medullaris.

Operation. An extensive laminectomy of 10th, 11th, 12th dorsal and 1st lumbar verte-