Incomplete myelographic block with hypertrophic spinal pachymeningitis

Case report

FREMONT P. WIRTH, JR., M.D., AND MOKHTAR GADO, M.D.
Division of Neurological Surgery and Edward Mallinckrodt Institute of Radiology, Washington University School of Medicine, St. Louis, Missouri

A case of hypertrophic spinal pachymeningitis with a symmetrical constriction of the cervical and upper dorsal subarachnoid space on myelography is reported. Previous reports have emphasized complete or partial block of contrast flow at one level. The extensive symmetrical compression of the subarachnoid space seen in this case represents the early changes seen with hypertrophic spinal pachymeningitis which result from widespread thickening of the dura.

Key Words: pachymeningitis, hypertrophic, meninges

HYPERTROPHIC spinal pachymeningitis, first described by Charcot in 1869, is characterized by radicular pain in the neck and arms progressing to weakness and atrophy of the arms and finally spastic paralysis of the legs with loss of sensation and sphincter control. The myelographic characteristics of this condition were first described by Moniz as a complete block except in rare cases. Subsequently several authors have reported a complete block on Pantopaque myelography. The symmetrical encroachment on the cervical subarachnoid space, as seen in the patient described below, has not been reported to our knowledge.

Case Report

A 31-year-old man had had neck pain of increasing severity and limitation of motion for 8 months. There was no history of trauma. He had been treated for venereal disease of unknown etiology while in military service in Viet Nam 4 years previously. Physical examination was abnormal only in severe limitation of neck motion secondary to pain and mild shoulder girdle weakness. Blood and CSF were negative on examination for syphilis. The R.A. factor and latex fixation were normal. The sedimentation rate was elevated as were C-reactive proteins. Spinal fluid glucose was 79 mg%, protein 49 mg%, and no cells were seen. The colloidal gold curve was 1222110000 and the gamma globulin fraction was elevated on electrophoresis of the CSF. Plain x-ray films of the cervical spine were normal.

Pantopaque myelography (Fig. 1) showed evidence of diffuse increase of the width of the extra-arachnoid space in the cervical region with irregularity but no block. The lesion extended from the upper border of C-3 to C-7 and appeared to envelop the theca at the posterior and both lateral aspects.

A complete laminectomy was performed from C-2 through T-1 and the thickened
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Fig. 1. Cervical myelogram, anteroposterior view. The subarachnoid space around the cord is uniformly narrowed. Note the increased width in the space between the contrast column and the wall of the bony spinal canal (arrows) on both sides.

The myelographic picture we have reported is unique in that it defines the symmetrical encroachment upon the cervical spinal cord by the hypertrophied dura prior to the development of a complete block. Incomplete myelographic block in hypertrophic spinal pachymeningitis has been reported in only three other cases, none similar to the above case.7,10 Moniz7 reported one of these cases; the radiographs presented depict an irregular, fragmented column of dye similar to the findings in arachnoiditis. The other cases of incomplete block in hypertrophic spinal meningitis refer only to a posterior filling defect.10

Diffuse increase in the extra-arachnoidal space without complete block, demonstrated in this case in the cervical region, may be seen early in the course of this disease. This myelographic picture is not surprising, since it accurately demonstrates the thickening of the dura prior to complete block. Recognition of the early myelographic changes with this condition is important because surgical decompression with dural excision may be beneficial.1-5,8-10

References

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Fig. 2. Left: Specimens of excised dorsal dura. The specimens taper from 5 to 2 mm in thickness. Right: Photomicrograph showing marked increase in collagenous material, and perivascular round cell infiltration. H & E, ×18.


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Address reprint requests to: Fremont P. Wirth, Jr., M.D., Division of Neurological Surgery, Washington University School of Medicine, Barnes Hospital Plaza, St. Louis, Missouri 63110.