This five-year-old boy was admitted with left arm weakness, bilateral lower extremity paralysis and bowel and bladder incontinence. On his first admission eight months prior, a Parinaud's syndrome was noted. At that time, a posterior third ventricular tumor with secondary hydrocephalus was demonstrated by computerized axial tomography, arteriography and ventriculogram. A right ventriculo-peritoneal shunt was inserted. Subsequent treatment consisted of cobalt therapy (3800 r tumor dose) and chemotherapy. Three months prior to this admission, spinal cord metastases resulted in a complete decompressive laminectomy of thoracic vertebrae 2-5. Attempted biopsy of the tumor was unsuccessful. He was treated with 3000 rads to the spinal axis and another course of chemotherapy.

The admission physical examination demonstrated bilateral lower extremity flaccid paralysis and absent reflexes. There was loss of sensory functions below the nipple line. He expired one day after admission. The clinical impression was respiratory paralysis secondary to tumor extension.

Neuropathological findings: Sagittal sections of the brain revealed multiple tumor nodules in the subarachnoid space. The largest nodule measured 2 cm. in diameter and was involving the right cerebellar hemisphere. The pineal body appeared atrophic and calcified. There was diffuse subarachnoid deposition of tumor about the spinal cord. In addition, a few small tumor nodules were noted on the peritoneum of the abdominal wall and the diaphragm.

Microscopic pathology: Submitted slides are cross sections of spinal cord one stained with H & E and one unstained.

Points for discussion:

Diagnosis.