Hydrocephalus due to spinal tumor

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Spinal cord astrocytomas and ependymomas are more frequently associated with hydrocephalus

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Hydrocephalus secondary to intraspinal tumors is a well-known but rare condition since about 1% of patients with spinal cord tumors have various degrees of hydrocephalus at initial presentation.

The mechanism of development of intracranial hypertension and hydrocephalus in patients with spinal cord tumor is not exactly known.

? due to ↑ protein?, ↑ venous pressure?, previous hemorrhage in some?

Hydrocephalus secondary to intraspinal tumors is a well-known but rare condition since about 1% of patients with spinal cord tumors have various degrees of hydrocephalus at initial presentation.

This uncommon association should always be kept in mind in the differential diagnosis of hydrocephalus of unknown etiology for three main reasons: the possibility of neurological deterioration if the patient is shunted prior tumor removal, the possibility to treat the hydrocephalus without shunting by simply removing the tumor, and the possible role of hydrocephalus as an early sign of intracranial metastasis in patients previously operated upon for removal of intramedullary gliomas. Due to the very slow evolution of the disease, a careful and close clinical and neuroradiological follow-up are essential for many years afterward. The presence of intracranial hypertension in a patient previously operated for a spinal tumor should be considered and investigated as an early sign of neoplastic intracranial seeding. [1)]

2017

Intermittent change in ventricular size is a recognised ventriculoperitoneal shunt complication but definitive imaging evidence is rare.

Aly et al. report a 3 years old boy with a spinal cord astrocytoma and ventriculoperitoneal shunt placement who demonstrated intermittent ventriculomegaly during a single MRI scan [2)]

[1)]

Mirone G, Cinalli G, Spennato P, Ruggiero C, Aliberti F. Hydrocephalus and spinal cord tumors: a review. Childs Nerv Syst. 2011 Oct;27(10):1741-9. doi: 10.1007/s00381-011-1543-5. Epub 2011 Sep 17. PMID: 21928038.

2)

Aly A, El-Beshlawi I, Howarth S, Smith S. MRI capture of intermittent ventriculomegaly in a patient with ventriculo-peritoneal shunt. Br J Neurosurg. 2017 Oct;31(5):601-602. doi: 10.1080/02688697.2017.1333571. Epub 2017 Jun 2. PMID: 28574289.