

**Canadian Association of Neuropathologists
L'Association Canadienne des Neuropathologistes**

CASE No 5

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Clinical History:

This 21 month old boy, with previous history of antenatally detected bilateral hydronephrosis which has been managed conservatively, had no specific concerns until the end of May 2010 at which time the parents noticed a slight head tilt. Eventually he started to complain of headaches and then developed recurrent vomiting. Early in June he showed loss of balance and was brought to the Emergency Department by his parents and was admitted to SickKids.

Radiology:

He had an urgent CT scan followed by an MRI scan which showed a large 5.6 x 5.0 x 4.5 cm posterior fossa mass extending into the left CP angle and into the foramen magnum. The mass enhanced heterogeneously following contrast. It was associated with mild dilatation of the third and lateral ventricles. There were multiple arterial vessels in the tumor. There was no evidence of dissemination to either the brain or the spine.

Surgery:

An acute deterioration secondary to hemorrhage into the tumor necessitated urgent surgery. A gross total excision of the tumor, which was not infiltrating the brain stem or encasing any of the cranial nerves, was performed. There was no clear evidence of residual tumor on the post-operative MRI.

Postoperative course:

He had a good postoperative recovery without any evidence of posterior fossa mutism or neurological deficits. However, a CT scan performed six days post-op (because he was irritable) disclosed extensive venous sinus thrombosis and he was started on heparin.

Material submitted: one representative H&E stained slide.

Question: Diagnosis?
 What confirmatory test would you do?