

Adult Chiari Malformation

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Adult Chiari Malformation

- Common findings
 - Caudal portion of cerebellar tonsils in cervical spinal canal (5 mm or more of displacement below foramen magnum) thus compressing the medulla and upper cervical spinal cord and restricting cerebrospinal fluid pulsations and flow around the foramen magnum
 - Usually presents as a young adult but may present later
 - May present with cervical pain, headache, difficulty with motor functions, spasticity, imbalance, swallowing difficulties
 - Syringomyelia

Diagnosis

- Neurologic examination
- MRI showing tonsillar herniation 5 mm or greater below foramen magnum with medullary and cervical cord compression/crowding
- Cine MRI to look for abnormal reduced CSF flow and pulsations at the foramen magnum
- Somatosensory evoked potentials to look for delays in electrical impulses

Treatment

- Surgical decompression with
 - Removal of the suboccipital bone
 - Opening of the suboccipital dura
 - Possible dural patch graft
 - Possible resection of cerebellar tonsils