

Imaging Sciences Interesting Cases

CASE 489

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CLINICAL PRESENTATION: Patient is a 34-year-old female with right arm numbness and pain.

IMAGING FINDINGS: See below.





Figure 1A-C: Sagittal T2 images of the thoracic spine. **Fig. 1A** demonstrates abnormal increased signal in the central cervical spinal cord (red arrow). There is tonsillar ectopia (green arrow). **Figs. 1B&C** demonstrate abnormal increased signal in the central spinal cord (red arrows) extending from the cervical spinal cord to the lower thoracic cord.

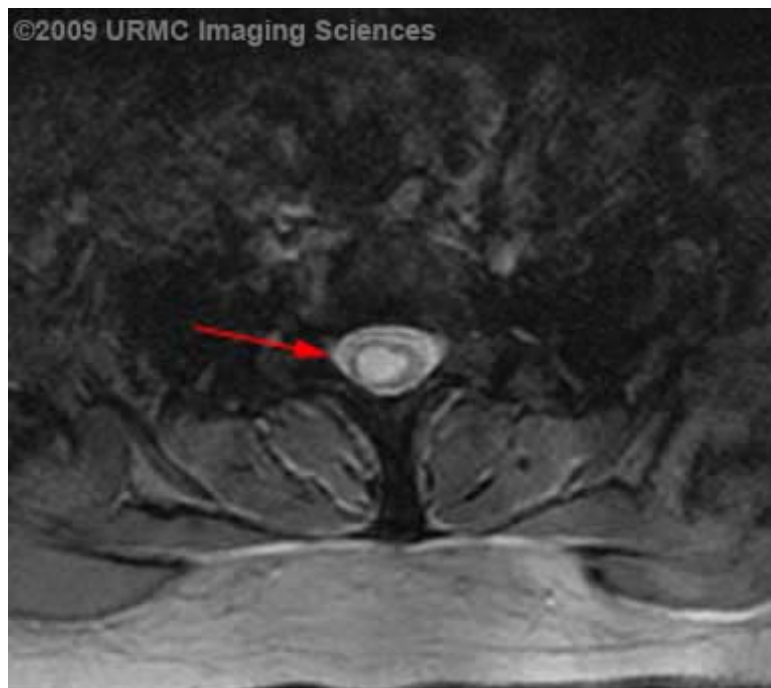


Figure 2: A single axial GRE image of the thoracic spine demonstrates abnormal high signal in the central thoracic cord.

DIAGNOSIS: Syringohydromyelia; Chiari 1 malformation.

DISCUSSION: A syringomyelia is a cavity in the spinal cord which may or may not communicate with the central canal. A hydromyelia represents dilation of the central canal and is lined by ependymal tissue. The differentiation can be difficult radiologically and clinically, and the word syringohydromyelia can refer to both. "Syrinx" is a common term referring to both syringomyelia and hydromyelia, though syringomyelia is derived from "syrinx" which means tube or pipe in Greek. Syringohydromyelia can be congenital or secondary to trauma, inflammation, spinal cord tumors, and vascular insufficiency. Spinal dysraphism, myelocoele, Chiari malformation, Dandy-Walker syndrome, and spinal segmentation defects are some of the associated congenital abnormalities. Clinically patients present with loss of pain and temperature sensation with preservation of light touch and proprioception. Additional findings include weakness, spasticity, hyperreflexia, and abnormal reflexes. The cervical cord is characteristically involved, but any portion of the spinal cord may be affected. MRI is sensitive in detecting syringohydromyelia.

REFERENCES:

1. Batnitzky S, Price HI, Gaughan MJ, Hall PV, Rosenthal SJ. The radiology of syringohydromyelia. *Radio-graphics* 1983 Nov;3(4):585-611.