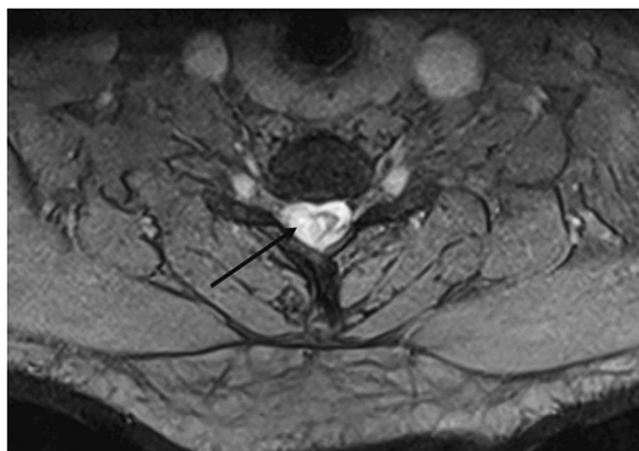


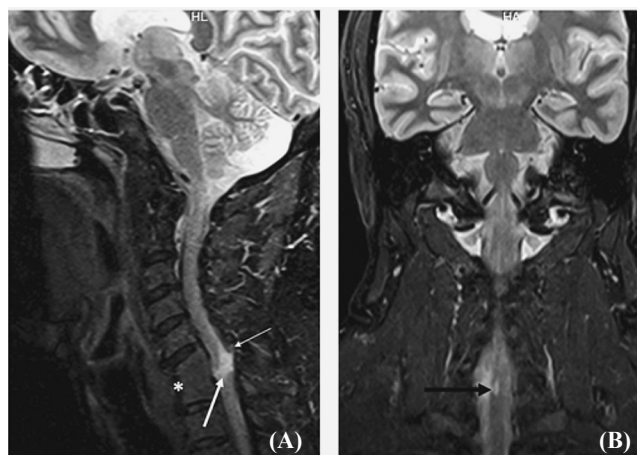
## Clinical Images

### Brown-Séquard syndrome



**Fig. 1.** Axial gradient MR image showing hyperintensity (black arrow) in right side of lower cervical spinal cord. Involved part of cord also appears oedematous.

A 57 yr old male was brought to Radiology department, Saveetha Medical College Hospital, Thandalam, Tamil Nadu, India, for evaluation of cervical spine in June 2013. He had history of stab injury to the right side of neck following which the patient developed ipsilateral hemiparesis and contralateral sensory loss below C6 dermatome. On right side, positive Babinski's sign was noted with no abdominal and cremasteric reflexes. No leakage of cerebrospinal fluid (CSF) was noted from the wound. Magnetic resonance imaging (MRI) of cervical spine revealed C6-C7 block vertebra with focal linear hyperintensity in right side of cervical spinal cord at the same level (Figs. 1, 2). Diagnosis of Brown-Séquard syndrome (BSS) due to cord hemitransection was made. The patient was managed conservatively with cervical



**Fig. 2(A)** Sagittal short tau inversion recovery (STIR) MR image showing C6-C7 block vertebra (white asterisk) with a focal linear hyperintensity in spinal cord (thick white arrow) at this level. Focal disruption of ligamentum flavum is also noted (thin white arrow). **(B)** Coronal STIR MR image showing focal hyperintensity confined to right side of cervical spinal cord (black arrow).

spine stabilization and supportive and physical therapy. He is under follow up for the past six months and has shown progressive improvement in muscle power and sensation with only mild residual paresis of right lower limb.

Brown-Séquard syndrome is characterized by anatomical disruption of nerve fibre tracts in one half of spinal cord. Disruption of descending lateral corticospinal tracts, ascending dorsal column and ascending spinothalamic tracts leads to ipsilateral hemiplegia and loss of proprioception and vibration with contralateral loss of pain and temperature sensation below the level of injury<sup>1</sup>. Common causes of BSS include cord trauma, neoplasms, disk herniation, demyelination, infective/ inflammatory

lesions or epidural hematomas with penetrating trauma to cord being commonest cause<sup>1-3</sup>. In literature, very few cases of penetrating stab cord injury presenting with pure BSS have been described<sup>1,4</sup>. Management of BSS depends on the causative pathology. Need for conservative or surgical management depends on patient's neurological status and clinico-radiological findings. Surgery intervention is advised in post-traumatic BSS if there is presence of retained foreign objects, CSF leakage, infection or signs of extrinsic spinal cord compression. Medical management is preferred for infective/ inflammatory or demyelinating causes of BSS while surgical treatment is performed for pathologies causing extrinsic cord compression<sup>2,3</sup>.

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