Case 075: Upper limb numbness and weakness.

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A 60 year old woman presented to the Medical Clinic with progressive numbness and weakness of both upper limbs for one year, worse on the right side. There was no history of trauma. She was a non-drinker.

Examination showed she had cervical-thoracic kyphoscoliosis. There was bilateral marked small-hand-muscle wasting. Upper limb power was weaker on the right proximally (3+/5) and distally (5-/5) than the left (4/5 and 5/5). Apart from a diminished left supinator jerk, reflexes in the upper limbs were absent. Pain and temperature sensation was absent, but fine touch was intact over the shoulders and the upper limbs.

With respect to the lower limbs, power was normal. Left knee and ankle jerks were brisk. There was bilateral up-going plantar reflex. Sensations in the lower extremities were intact.

Question 1

What is the most likely diagnosis in this patient?

(a) Motor neurone disease.
(b) Recurrent stroke.
(c) Polyneuropathy.
(d) Syringomyelia.
(e) Subacute combined degeneration of the spinal cord.
Question 2

What is the most appropriate investigation that should be ordered?

(a) Cervical X-ray.
(b) MRI scan of spinal cord and brain.
(c) CT scan of brain.
(d) Serum vitamin B12 level.
(e) Nerve conduction study.

Go to end of article for answers.

General comments 1

This patient presented with dissociated sensory loss and areflexic weakness in the upper limbs, which are typical of a central cord syndrome. Injury or condition that preferentially damages the central gray matter of the cervical spinal cord can lead to this syndrome. The differential diagnoses are cervical spondylotic myelopathy, traumatic injury to the cervical spine, tumors and syringomyelia.

General comments 2

The MRI scan of this patient’s spine and brain showed severe syringomyelia. There was no tumor seen at any level of the cord. There was cerebellar herniation to 8 mm below the foramen magnum. Such features are in keeping with a diagnosis of Chiari type 1 malformation. With the Chiari malformations, cough-induced headache and neck, arm or facial pain are common.

General comments 3

As syringomyelia progresses and the syrinx enlarges, spasticity and weakness of the lower limbs, bladder and bowel dysfunction and, in some cases, a Horner’s syndrome appear.
Correct answers

Question 1: (d) Syringomyelia.
Question 2: (b) MRI scan of spinal cord and brain.

Further readings
