

Recognising anterior spinal artery syndrome

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Case report

Anterior spinal cord (ASA) infarction is a rare devastating disorder. The following illustrates such a case:

A 40 year old theatre nurse who recently had a long-haul flight woke up at 2 am complaining of back pain, chest pain and bilateral leg weakness. She was then brought to the emergency department. She denied any headache, slurring of speech, visual disturbances, dyspnoea, urinary or faecal incontinence. She had no past medical history and was on no medication. She had no significant family history and was a non smoker. On examination, all her vitals were normal. Her GCS was 15/15. On auscultation, her heart sounds were normal with no murmur and her chest was clear with good chest movement. Her abdomen was soft and non tender. Cranial nerve examination and neurological examination of her upper limbs were normal. On examining her lower limbs, her tone was flaccid with absent knee and ankle reflexes bilaterally, power in both her lower limb were 0/5, her sensation was markedly reduced from her xiphisternum to her toes. Her anal tone was also reduced. However her proprioception and vibration were still present in her lower limbs. Her plantar reflexes were upgoing bilaterally. Her ECG showed a normal sinus rhythm and her CXR was normal. FBC, U&E, CRP, LFT, Troponin, D-Dimer were all normal. CT aortogram and MRI brain done was normal but unfortunately MRI of her spine confirmed an ASA infarct. She was started on high dose aspirin and transferred to a tertiary neurological centre for continuation of care.

ASA infarct typically presents as loss of motor function and pain/temperature sensation, with relative sparing of proprioception and vibratory sense below the level of the lesion. The acute stages are characterized by flaccidity and loss of deep tendon reflexes; spasticity and hyperreflexia develop over ensuing days and weeks. Autonomic dysfunction may be present and can manifest as hypotension (either orthostatic or frank hypotension), sexual dysfunction, and/or bowel and bladder dysfunction. Chest pain with ECG changes has been reported in a patient with C7 to T1 spinal cord infarction. In the acute evaluation of patients, it is important to recognize that hypotension may be both a cause as well as a manifestation of spinal cord ischemia. If the lesion is in the rostral cervical cord, respiration is compromised. A broad spectrum of diseases can cause spinal cord infarction. The mechanisms underlying these can be broadly categorized as diseases or procedures involving the thoracoabdominal aorta, intrinsic arterial occlusion (resulting from arteriosclerosis, vasculitis, infection, embolic occlusion, thrombosis), hypoperfusion and venous infarction. Poor prognostic factors for recovery include severe impairment at presentation, female sex, advanced age and lack of improvement in the first 24 hour [1].

Reflecting on this case, clinical examination revealing the sparing of the functions in the dorsal column was the main guide in helping getting the right diagnosis clinically.

References

1. <http://www.uptodate.com/contents/spinal-cord-infarction-clinical-presentation-and-diagnosis>

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