Teaching NeuroImages: Sulcal artery syndrome

A hemicord infarct presenting with incomplete Brown-Sequard syndrome

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Figure 1 MRI shows C5 hemicord T2 hyperintensity

T2-weighted MRI sequence (day 3), sagittal (A) and axial (B) sections.

A 59-year-old man with a history of smoking presented with acute right hemiparesis, pain, and temperature loss on the left below T4 and impaired left-sided abdominal reflexes. Proprioception and vibration were normal. MRI (day 3) showed a short segment of T2 hyperintensity at the right half of C5 spinal cord (figure 1); diffusion-weighted MRI (day 5) demonstrated restricted diffusion (figure 2), confirming hemicord infarct. Sulcal artery occlusion presents with incomplete Brown-Sequard syndrome and is uncommon, unlike the more common anterior spinal artery syndrome.¹ It preferentially involves the cervical cord.² With physiotherapy, aspirin, and statins, this patient recovered well.

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Author contributions

J.M.N. Fong: writing of manuscript. G.J. Ng: writing of manuscript. N.C.K. Tan: study concept and design, critical revision of manuscript.

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Figure 2 MRI shows restricted diffusion

Diffusion-weighted MRI sequence (day 5), diffusion-weighted sagittal (A) and axial (C) and apparent diffusion coefficient sagittal (B) and axial (D) sections.

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