

# Heart Sign” - the epitome of bilateral medial medullary infarct

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## SUMMARY

Bilateral medial medullary infarction (BMMI) is a rare and severe subtype of stroke, accounting for less than 1% of all acute strokes. It typically presents with quadriparesis, bilateral hypoglossal palsy, bilateral sensory deficits, and respiratory failure. BMMI can mimic other neurological emergencies such as Guillain-Barré syndrome, myasthenic crisis, and brainstem encephalitis, often leading to misdiagnosis. Atherosclerotic disease is the most common cause. **Case Presentation:** A 61-year-old Malay man with diabetes and hypertension presented with a sudden onset of left-sided numbness. Neurological and cranial nerve assessments were normal, and a CT scan showed chronic lacunar infarcts. His symptoms resolved, and he was admitted for a transient ischaemic attack. On the second day, he developed left-sided hemiparesis, with blood pressure elevated to 200/112 mmHg. Over the next 24 hours, his condition progressed to quadriparesis, dysarthria, and dyspnoea. Muscle strength declined to 0/5 in all limbs. Despite permissive hypertension, his condition continued to deteriorate, requiring intubation. An MRI brain revealed acute BMMI with intracranial atherosclerotic disease (ICAD). Dual antiplatelet therapy was initiated. A tracheostomy was performed on day 12 due to failed extubation. After aggressive physiotherapy, he regained limited movement in the left limbs and was referred to a rehabilitation centre. BMMI is most often caused by ICAD. Diagnosis can be challenging due to overlapping symptoms with conditions like Guillain-Barré syndrome. The “heart sign” on MRI is indicative of bilateral pyramidal tract involvement, which is classical. Early recognition and intervention are critical for improving outcomes.