Broken PIPE, Beaten BRAIN : stroke-mimic aortic dissection

**CASE DESCRIPTION**

A 67-year-old Singaporean male, with a history of hypertension and dyslipidemia, was brought to our centre. He earlier went to the toilet, and suddenly experienced left-sided weakness and slurred speech. Initial vital signs were: BP 110/86, HR 72, RR 20, T 36.5°C. Neurologically, his GCS was E4V4M6, with power graded as Left upper limb 3, left lower limb 0, right upper and lower limbs 4. Blood glucose was 3.7 mmol/L; and 20cc of D50%,administered with no symptoms recovery.

The stroke protocol was activated as it was wthin intervention time, and he was sent for a CT scan. Post-CT brain, a CTA brain and CT perfusion revealed an extensive Stanford A aortic dissection involving the aortic arch, descending aorta, brachiocephalic trunk, and left subclavian artery. The patient deteriorated rapidly post-CT, exhibiting a drop in GCS, hypotension. He was intubated, started on inotropes, and co-managed with the surgical team. Due to the severity of the dissection, surgical intervention was deemed infeasible amd the bad prognosis informed to the family. Family understood, and requested for tranfer back to Singapore. Unfortunately passed away upon arrival on the same day

Discussion

This patient predominantly exhibited neurological symptoms without pain, a presentation seen in one-third of Stanford A aortic dissection cases. These symptoms likely resulted from the dissection or occlusion of aortic branches supplying the brain, spinal cord, or peripheral nerves. The patient developed malperfusion syndrome, characterized by lower extremity pulse deficits, approximately 5-6 hours after onset. Malperfusion, defined as loss of blood supply to arterial branches due to dissection, is the second most lethal complication of acute aortic dissection after rupture.

Conclusion

This case highlights the critical role of advanced imaging modalities like CTA in emergency departments to promptly diagnose and manage life-threatening conditions such as aortic dissection, even in the absence of classic symptoms. Ensuring the availability of such diagnostic tools in all centers is imperative for improving patient outcomes.