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Cardiocerebral Infarction. A double edged sword

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A 40-year-old male, chronic smoker and hypertensive, presented six hours after the onset of typical chest pain accompanied by altered consciousness. ECG revealed ST-segment elevation in leads V1 to V6. On examination, his blood pressure was 180/100 mmHg, pulse rate 80 bpm, and Glasgow Coma Scale (GCS) score was 13/15. Neurological findings included an NIHSS score of 18, complete motor weakness (0/5 power) in the right upper and lower limbs, and an upgoing right plantar reflex.

Imaging:

Non-contrast CT brain ruled out intracranial hemorrhage. Coronary angiography revealed a subtotal (99%) occlusion of the left anterior descending artery (LAD) with TIMI 1 flow. Cerebral angiography demonstrated a complete occlusion of the left middle cerebral artery (M1 segment).

Clinical Dilemma:•NOW WHAT NEXT?? •WHICH ONE TO FIX FIRST??? •BRAIN •OR HEART ?

The team faced a critical decision: whether to address the cerebral or coronary event first, balancing the urgency of both with the risks of antithrombotic therapy.(Anticoagulant and antiplatelet Strategy. ?? A double edged sword.)

Intervention:

Endovascular treatment was initiated first. The left internal carotid artery (ICA) was engaged using a Destination sheath. Mechanical thrombectomy was performed using the ADAPT technique with a Sophia aspiration catheter, achieving TICI 3 reperfusion in a single pass.

Subsequently, PCI was performed without prior administration of antiplatelet agents or a heparin bolus. The guide catheter was flushed continuously with heparinized saline to prevent thrombosis, and plain balloon angioplasty (POBA) was done to the LAD.

A follow-up CT brain scan at 12 hours showed no hemorrhagic transformation. Single antiplatelet therapy was started at that time, followed by dual antiplatelet therapy (DAPT) after 72 hours, once MRI confirmed no hemorrhagic conversion. The patient was discharged and returned two weeks later for elective PCI to the LAD, with continuation of DAPT.

Discussion & Learning Points:

• Cardiocerebral infarction is a rare but life-threatening clinical scenario, with a prevalence of 0.009%, and about 0.7% in hospitalized patients.

• Simultaneous acute myocardial infarction (AMI) and ischemic stroke require urgent intervention within narrow therapeutic windows.

• A combined interventional approach, when feasible, can optimize outcomes, reduce procedural delays, and limit complications, especially when guided by careful imaging and individualized antithrombotic strategies.