

Intracranial tuberculous mycotic aneurysm in a lady with multiple myeloma

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ABSTRACT

Introduction: Mycotic aneurysm is dilation of arterial wall caused by infection such as bacteria, fungus and mycobacterium spp. The risk is higher in immune-compromised patient and complications typically involve formation of pseudoaneurysm, rupture and sepsis. Here we report a case of multiple intracranial mycotic aneurysms secondary to tuberculosis in a lady with multiple myeloma. **Case Description:** A 48-year-old lady with not known medical illness, presented with shortness of breath and constitutional symptoms. She was diagnosed with tuberculosis as chest X-ray showed bilateral apical consolidation and sputum revealed scanty acid-fast bacilli. At the same time, she had deranged renal profile, anaemia and hypercalcaemia on presentation. Workup revealed Kappa light chain paraproteinaemia and she was diagnosed with multiple myeloma. She was initiated on haemodialysis as her kidney function continued to deteriorate and planned for chemotherapy. In a series of unfortunate events, she developed seizure in ward with subsequent isolated right 3rd cranial nerve palsy. Contrast CT scan of brain revealed bilateral cavernous internal carotid artery (right 1.9 x 1.5 x 1.6cm, left 1.4 x 1.1 x 0.9cm) and right middle cerebral artery bifurcation (2 x 2 x 2mm) aneurysms, likely secondary to tuberculosis as her cerebrospinal fluid TB Xpert MTB/RIF assay came back positive. She was treated conservatively with anti-tuberculous therapy as CT reassessment showed stable aneurysms with no increase in size. **Discussion:** Mycotic aneurysm is a rare and severe complication of tuberculosis with most cases reported involving aorta, femoral artery and smaller vessels such as visceral arteries, and rarely, extracranial and intracranial arteries. Treatment of intracranial tuberculous mycotic aneurysm typically involves endovascular intervention (endovascular coiling, flow-diverter stent), surgical clipping or conservative management, and anti-tuberculous therapy for tuberculosis.