Simultaneous Open Repair of Symptomatic Saccular Thoracic and Infrarenal Abdominal Aortic Aneurysms in a Young Smoker: A First Case Report from Yemen

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Abstract (300 word limit)

Introduction: Saccular thoracic and abdominal aortic aneurysms (TAAA) are rare, accounting for approximately 5% of all aortic aneurysms. They carry a high risk of rupture (up to 90% mortality), necessitating repair at smaller diameters than fusiform aneurysms. This case is unique due to the patient's young age, the presence of synchronous saccular aneurysms in two aortic segments, and an associated left ventricular thrombus.

Case Presentation: A 36-year-old male smoker, with no history of hypertension, diabetes, or trauma, presented with chronic chest, abdominal, and left lower limb pain so severe he was unable to walk. Clinical examination revealed pulsatile abdominal mass. Contrast-enhanced CT angiography demonstrated two saccular aneurysms: one in the descending thoracic aorta and a second, large, infrarenal abdominal aortic aneurysm with evidence of contained rupture (periaortic hematoma). An organized thrombus was also noted in the left ventricle. Autoimmune screening was initially negative. Due to the symptomatic, large, and high-risk morphology, the patient underwent successful single stage open surgical repair via left thoracotomy and left retroperitoneal approach, with Dacron graft replacement of both aneurysms. Post-operatively, the patient developed transient lower limb weakness managed with cerebrospinal fluid (CSF) drainage and mild acute kidney injury, both of which resolved. He was discharged on post-operative day eight. Subsequent rheumatology consultation diagnosed Behçet's disease.

Conclusion: Saccular TAAA can occur in young patients with minimal traditional risk factors. Chronic back pain in young adults warrants aortic screening after common causes are excluded. Smoking is a significant modifiable risk factor. Simultaneous repair of multiple saccular aneurysms is feasible but requires rigorous spinal cord protection strategies. This case also highlights that a negative initial autoimmune panel does not rule out underlying vasculitis, and young patients with saccular aneurysms should have long-term rheumatology follow-up.

Photograph



Biography (150 word limit)

Dr. Nasr Alzakari is a distinguished vascular surgeon and academic clinician who has dedicated his career to advancing clinical excellence, patient care, and healthcare delivery systems. He has built this comprehensive clinical and academic model drawing upon years of rigorous experience in surgical practice, clinical research, quality evaluation, and medical education across both advanced hospital environments and academic institutions.His professional framework is grounded in responsive, patient-centered care and value-pluralism—acknowledging and integrating the diverse perspectives of all healthcare stakeholders, including patients, multidisciplinary surgical teams, and hospital administrators. By bridging traditional clinical measurement and description with contemporary evaluative methodologies, Dr. Alzakari champions innovative pathways for improving healthcare quality, surgical safety, and vascular disease management outcomes.

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