

Spondylitis and Aortic aneurysm

The aim of a [study](#) of Patelis et al. from [Greece](#) was to assess any relation between [spondylitis](#) and [aortic aneurysmal](#) disease by reviewing the current [literature](#).

[Systematic serching](#) was undertaken using [MEDLINE](#), [EMBASE](#) and [CENTRAL](#) databases till May 2019, for articles reporting on patients suffering from [spondylitis](#) and aortic aneurysm.

The most involved aortic segment was [infrarenal aorta](#) (56.9%). The [lumbar vertebrae](#) were more frequently affected (79.7%). Commonest [symptoms](#) were [back pain](#) (79.1%), [fever](#) (33.7%) and lower limb pain (29.1%). 55.8% of cases were diagnosed using [computed tomography](#). The pathology was attributed to infectious causes in 25.1% of cases. 53.4% of patients were treated only for the [aneurysm](#), 27.9% for both pathologies, while two patients solely for the vertebral disease. Endovascular aneurysm repair was chosen in 12.8% of cases. The 30-day mortality was 8.1% (7/86); mostly from vascular [complications](#).

A synchronous spondylitis and aortic aneurysm may share common [etiopathology](#), when an infectious or inflammatory cause is presented. The [lumbar vertebrae](#) are more frequently affected. Low quality data do not allow safe conclusion to suggest the best treatment option ¹⁾.

Inflammatory conditions are a rare cause of aortic aneurysms, accounting for 3% to 10% of cases. Patients with [ankylosing spondylitis](#) uncommonly present with ascending aortic aneurysms related to long-standing, aggressive disease. Miller et al. reviewed the case of a young man with ankylosing spondylitis exhibiting complex inflammatory aortic aneurysms atypically involving the abdominal and descending thoracic aorta, as well as ectasia of medium-sized visceral vessels. Inflammatory aneurysms require a multidisciplinary approach incorporating diagnostic modalities to confirm etiology, targeted immunosuppressive therapy to control disease activity, and aneurysm repair. Evidence suggests that endovascular approaches should be considered first-line therapy for patients requiring reconstruction when anatomy is appropriate ²⁾.

A 69-year-old man was admitted with low back pain and signs of nerve root compression. A computed tomography (CT) scan showed abscess formation in the left psoas region, spondylodiscitis L3-L4 and a ruptured abdominal aortic aneurysm. The aortic aneurysm was replaced with a bifurcated vascular graft. One week later, laminectomy at the L4-level was done. In a small abscess, *Mycobacterium bovis* was found. The condition was considered to be a mycobacterial spondylitis secondary to BCG instillations of the urinary bladder for carcinoma. The patient received antituberculous medication for 9 months. Subsequently bone transplantation and internal fixation of the spine became necessary. Three years after surgery he is in good condition and there are no signs of graft infection on CT. Spondylitis and mycotic aortic aneurysm should be kept in mind in patients who have been treated for carcinoma of the bladder with BCG instillations ³⁾.

Ankylosing spondylitis (AS) is a rheumatic disease characterized by consolidation of the articulating surfaces and inflammation of the vertebral column. Because of its associated spine stiffness and secondary osteoporosis, patients with this disorder are at increased risk of vertebral fractures.

Ankylosing spondylitis presents a significant challenge to spine surgeons because of its complex effects on the spine, extraarticular organ manifestations, and potential neurological and functional sequelae. Traumatic thoracic and lumbar spine injuries in this patient population may be associated with injury to the aorta either due to direct mechanical trauma or to blunt forces associated with the spine fracture. This complication and association is thought to be the result of pathophysiological changes that cause the aorta to become firmly adherent to the anterior longitudinal ligament. The authors present a case of AS in a patient with a thoracic spine fracture and in whom a delayed thoracic aortic pseudoaneurysm ruptured. To the best of the authors' knowledge, only five cases of this complex condition have been reported since 1980. Recognition of the potential for aortic injury in patients with AS should prompt early investigation of the aorta in cases involving numerous fractures and assist in surgical planning to avoid this lethal injury ⁴⁾.

1)

Patelis N, Nana P, Spanos K, Tasoudis P, Brotis A, Bisdas T, Kouvelos G. The association of Spondylitis and Aortic Aneurysm Disease. *Ann Vasc Surg.* 2021 May 2;S0890-5096(21)00371-X. doi: 10.1016/j.avsg.2021.04.020. Epub ahead of print. PMID: 33951524.

2)

Miller RJH, Moore R, Kim B, Mosher D, Alvarez N. Inflammatory aortic aneurysm in a young patient with ankylosing spondylitis. *J Vasc Surg.* 2017 Aug;66(2):600-604. doi: 10.1016/j.jvs.2016.09.044. Epub 2016 Dec 14. PMID: 27988155.

3)

Dahl T, Lange C, Ødegård A, Bergh K, Osen SS, Myhre HO. Ruptured abdominal aortic aneurysm secondary to tuberculous spondylitis. *Int Angiol.* 2005 Mar;24(1):98-101. PMID: 15877007.

4)

Lifshutz J, Lidar Z, Maiman D. Thoracic aortic pseudoaneurysm after spine trauma in ankylosing spondylitis. Case report. *J Neurosurg Spine.* 2005 Feb;2(2):218-21. doi: 10.3171/spi.2005.2.2.0218. PMID: 15739538.

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