## Abstract:

**Title:** Osteophyte-Associated Abdominal Aortic Rupture During Posterior Spinal Surgery: A Case Report

**Authors:** Kathryn R. Borders[1], Samuel J. Thomas[2], Creed J. Roschyk[3], Jeffrey S. Borders[4], Micah W. Smith[5]

1. Department of Medical Education, Indianapolis Campus, Indiana University School of Medicine, Indianapolis, Indiana, U.S.A.
2. Department of Medical Education, South Bend Campus, Indiana University School of Medicine, South Bend, Indiana, U.S.A.
3. Department of Biomedical Engineering, Case Western Reserve University, Cleveland, Ohio, U.S.A.
4. Total Vein Solutions PC, Mishawaka, Indiana, U.S.A.
5. Orthopaedics Northeast, Fort Wayne, Indiana, U.S.A.

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**Objectives**:
The objective is to describe a rare case of abdominal aortic injury without direct penetrative trauma during an anterior/posterior spinal surgery to fuse the L2-L4 levels and demonstrate the importance of preoperative evaluation of the spine and vasculature.

**Methods:**
A 67-year-old man with a history significant for class 1 obesity, anemia, narrowing of the airway due to prior cervical fusion, and several previous posterior back surgeries for complex degenerative spinal disease presented to the spine surgeon with a chief complaint of chronic low back pain radiating down the right leg and groin, along with paresthesias of the right foot. This patient had severe scarring and osteophytes along the anterior spine, and therefore the surgeon elected to perform an oblique lateral intervertebral body fusion (OLIF) to fuse the L2-L4 levels and an OLIF at L3/4 with anterior longitudinal ligament (ALL) release. The posterior portion included T12-S1 fusion with pelvic fixation and L3/4 decompression. At completion of both the anterior and posterior portions of the procedure, the surgeons noted no evidence of active bleeding.

**Results:**
On postoperative day 1 the patient was noted to be hypotensive and returned to the operating room for an exploratory laparotomy. An aortic tear was identified and repaired with a Dacron

tube graft to achieve hemostasis. The patient was eventually discharged to a skilled nursing facility one month later.

**Conclusion:**

This rare complication was theorized to have resulted from tensile stress or laceration from an anterior osteophyte during the posterior portion of the case as there was no evidence of penetrative trauma. This speaks to the importance of careful preoperative evaluation of the spine and vasculature to better inform management of higher risk patients.