# 75 y/o male with incidental spine lesion

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#### **Clinical Presentation**

- 75 y/o male presented to outside ER for acute abdominal pain. Outside non-contrast CT showed diverticulitis and an indeterminate and incidental 5.0 cm soft tissue mass centered in the T12 vertebral body.
- Recommendation was given to further pursue MRI vs biopsy



5.0 cm lytic and destructive soft tissue mass centered in anterior T12 vertebral body but also involving the L1 vertebral body and paraspinal soft tissues. Surrounding eccentric calcifications and in close proximity to the aorta.

#### Initial differential

- Metastatic disease
- Nerve sheath tumor (Schwannoma, Neurofibroma, etc.)
- Infectious (osteomyelitis, discitis, abscess)
- Aortic aneurysm
- Fibrous tumor
- Lymphoma
- Granulomatous disease
- Extramedullary hematopoiesis

## MRI W/Wo contrast Lumbar spine 6/27/23



6cm anterior paravertebral mass inseparable from the abdominal aorta which scallops and invades the T12 and L1 vertebral bodies with flow voids and enhancement, concerning for contained and partially thrombosed abdominal aortic aneurysm



Saccular partially thrombosed abdominal aortic aneurysm involving the T12 and L1 vertebral bodies and intervening disc space. Consider possibility of mycotic aneurysm.



#### Vascular Surgery assessment/management

- No indication for emergent procedure
- Patient is totally asymptomatic and abdominal pain from diverticulitis improved after antibiotics
- Blood cultures and tagged WBC scan negative so mycotic aneurysm was unlikely
- No history or evidence of vasculitis
- Plan for outpatient TEVAR for definitive repair



- Elective thoracic endovascular aortic repair was done 2 weeks after initial presentation.
- Patient was discharged 2 days after TEVAR.
- Embolized the celiac artery to prevent a type II endoleak
- No follow up appointment with vascular surgery yet but procedure went well with no complications.



#### Followup CTA 8/15/23

No residual aneurysm filling status post TEVAR

#### Learning Points

### Full workup before biopsy if suspicious features are present

- The initial non contrasted CT from the outside hospital was tricky and a thrombosed aortic aneurysm could not be definitely characterized
- Before recommending a biopsy, should fully evaluate suspicious features for anterior spinal mass such as proximity to the aorta, eccentric/contiguous calcifications, and density
- Further studies to consider include CTA, MRI, or rarely conventional angiogram

#### Mycotic aneurysms

- Mycotic aneurysm should be excluded to prevent unneccessary complications
- Should be especially wary if there is an ill-defined surrounding bony cortex, soft tissue stranding, or multiplicity
- TB can have indolent course with little to no symptoms
- Next steps could include evaluation of risk factors and patient history, blood cultures, or tagged WBC scan

#### Further steps after treatment

- Follow up CTAs after treatment to exclude endoleak or aneurysm enlargement
- Consider referral to neurosurgery or orthopedics to confirm spine stability. Thoracic/lumbar spine arthrodesis can be done
- If there is significant concern, external spine brace to be used in the interim

#### References

- Zhang N, Xiong W, Li Y, Mao Q, Xu S, Zhu J, Sun Z, Sun L. Imaging features of mycotic aortic aneurysms. Quant Imaging Med Surg. 2021 Jun;11(6):2861-2878. doi: 10.21037/qims-20-941. PMID: 34079747; PMCID: PMC8107294.
- Lombardi AF, Cardoso FN, da Rocha Fernandes A. Extensive Erosion of Vertebral Bodies Due to a Chronic Contained Ruptured Abdominal Aortic Aneurysm. J Radiol Case Rep. 2016 Jan 31;10(1):27-34. doi: 10.3941/jrcr.v10i1.2274. PMID: 27200153; PMCID: PMC4861586.
- Ahn HJ, Kwon SH, Park HC. Abdominal aortic aneurysm rupture with vertebral erosion presenting with severe refractory back pain in Behçet's disease. Ann Vasc Surg. 2010 Feb;24(2):254.e17-9. doi: 10.1016/j.avsg.2009.05.011. Epub 2009 Nov 8. PMID: 19900780.