

Navigating the Centenarian Cliff: A Near-Miss Vertebral Compression Fracture Unveiled in a 89+Year-Old Woman Following a Syncopal Ballet

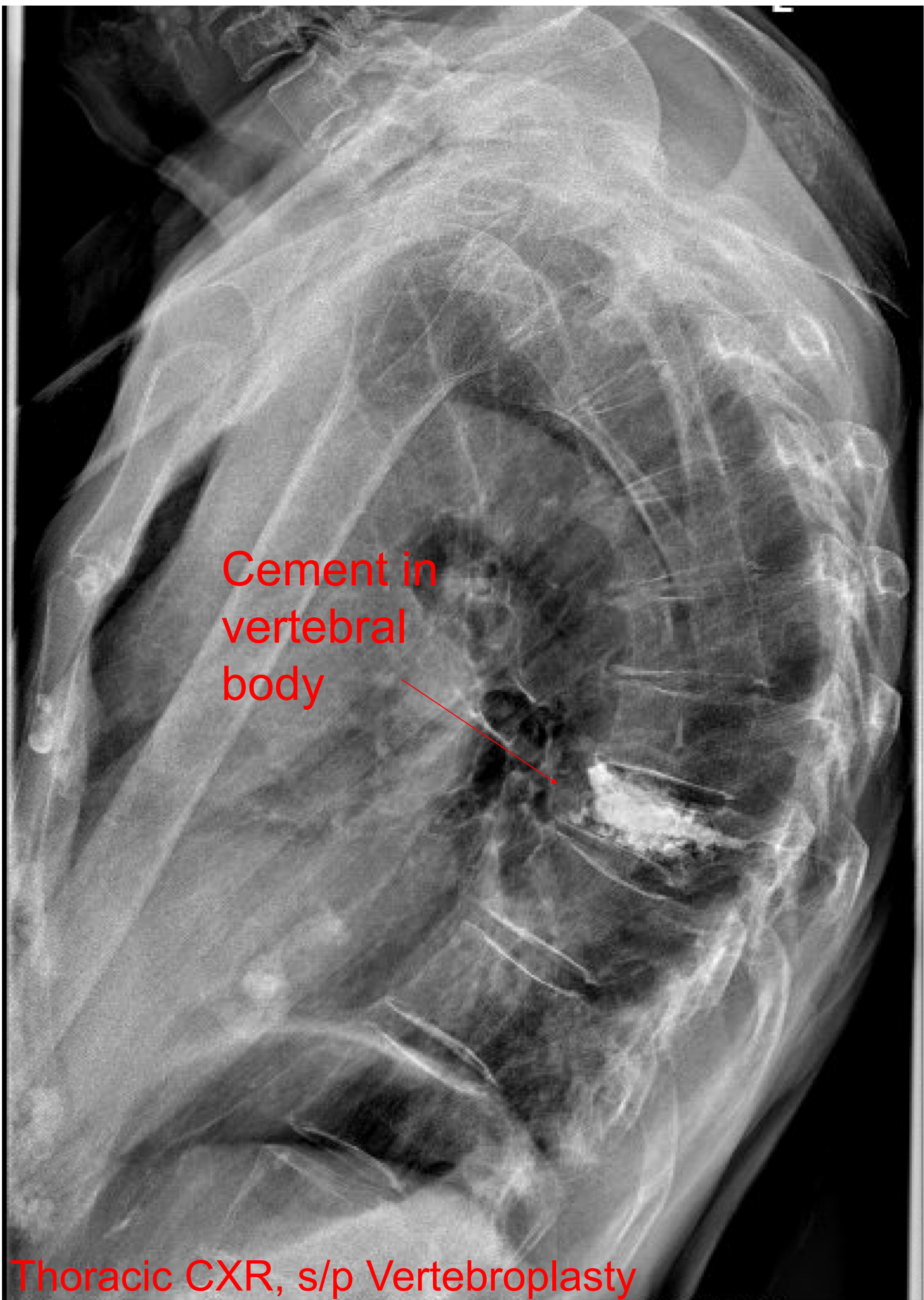
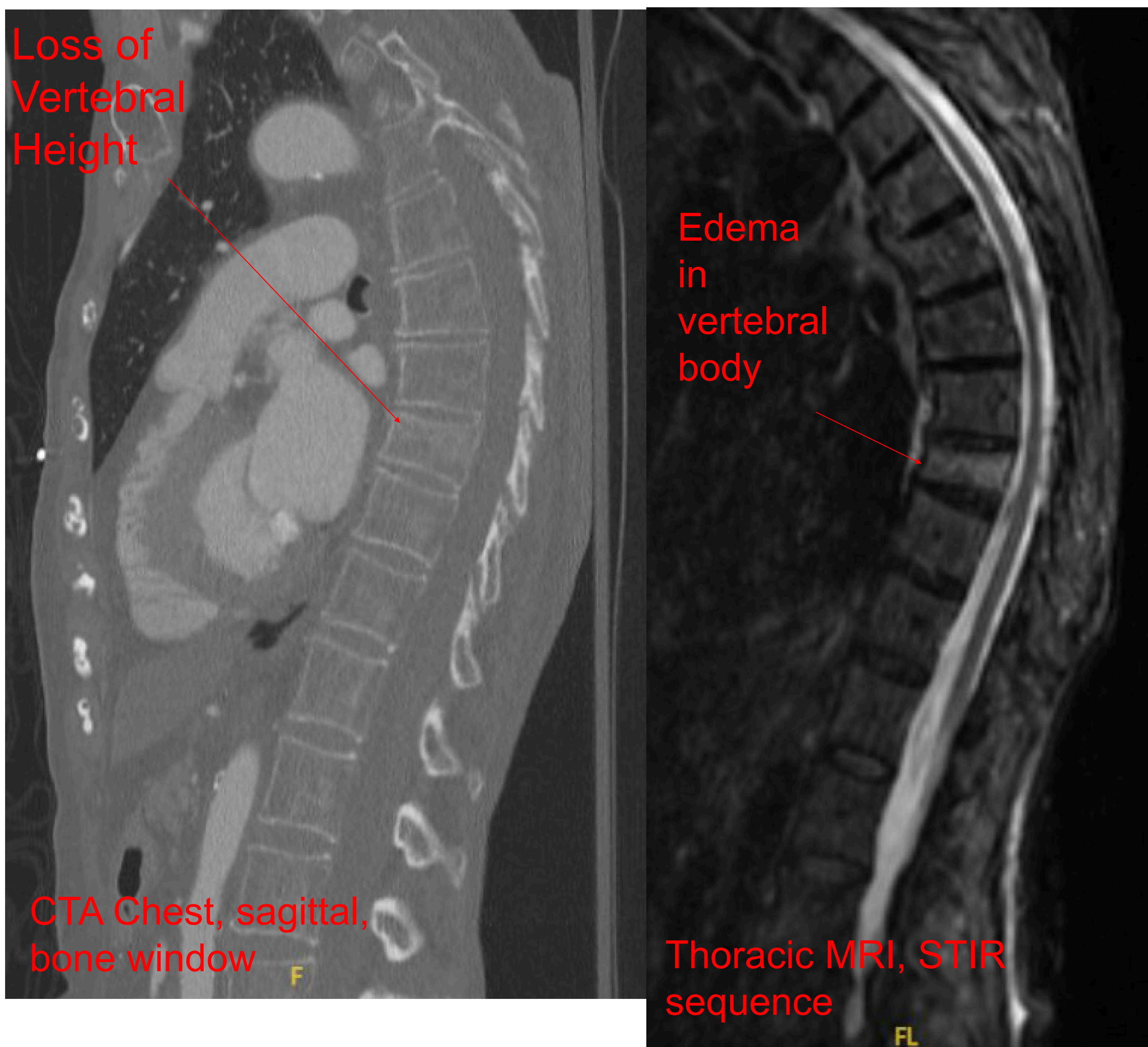
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Background

89+ year old female with a relevant past medical history of hypertension, bilateral glaucoma and hypothyroidism and no prior history of cardiac disease was admitted for syncopal workup after two syncopal falls and subsequent mid thoracic back pain. Initial trauma imaging was read as negative for any fractures, acute intracranial abnormalities, or pulmonary emboli. She had midline spinal tenderness. Her TSH and electrolytes were within normal limits, and her echocardiogram was noncontributory to her syncope. She was treated for orthostatic hypotension and was originally to be discharged on day 2 of her hospital stay, but had persistent new back pain refractory to non-narcotic analgesics. A review of the CTA chest ordered in the ED revealed wedging features of the T9 thoracic vertebra. This was confirmed by a re-read by the radiologist, prompting a consult to neurosurgery. A thoracic MRI confirmed a T9 acute vertebral compression fracture(VCF) by demonstrating edema. IR had completed a vertebroplasty leading to resolution of her pain and transfer to acute inpatient rehab.

Case Imaging



Discussion

VCF can be a subtle diagnosis as some patients may present asymptotically. It is radiographically diagnosed by a loss of vertebral body height by at least 20%. This case highlights the need for vigilance for possible VCF in the elderly adult population following a fall. Our patient's pain was initially thought to be muscular given the initial negative imaging despite positive physical exam findings. While the patient was functionally independent and very active prior to the fall, her demographics make this diagnosis more likely. Proper recognition of VCF is important due to a mortality of 11%¹, increased morbidity, and diminished quality of life. An acute VCF is treated with vertebral augmentation and is found to have superior outcomes to non-interventional management. Given that a VCF is an osteoporotic defining fracture, current guidelines recommend the initiation of anti-resorptive therapy while admitted with PCP follow up. Unfortunately, this step of treatment is often overlooked, leading to lack of treatment of the patient's underlying osteoporosis.

Conclusion

VCF is an important diagnosis to consider for back pain in the elderly following a fall. MRI can definitively demonstrate an acute fracture if initial imaging and physical exam is indeterminate. It is important to keep a broad differential and consider patient demographics to look for VCF. Consult neurosurgery or interventional radiology to determine if the patient is an appropriate candidate for vertebral augmentation and begin anti-resorptive agents while admitted with close follow up with PCP.

References

1. Lau E, Ong K, Kurtz S, Schmier J, Edidin A. Mortality following the diagnosis of a vertebral compression fracture in the medicare population. J Bone Jt Surg. 2008. doi:10.2106/JBJS.G.00675

