Case	(161) Ankilosing spondylitis: increased risk of vertebral fractures, sometimes of difficult diagnosis
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CASE PRESENTATION

We report the case of a 65 year-old-man with a kidney transplant hospitalized because a renal failure, who fell out of the bed and began complaining of severe back and abdominal pain. Plain X-ray was performed and showed a fracture with disruption of spine.

Ultrasound was informed of free fluid without other findings. Then an abdominal and pelvic CT was performed and a shear fracture of the lumbar spine (L1-L2) involving all three columns tipical in fused spines (Chalk stick fracture) and minimal retroperitoneal bleeding around psoas muscles were demostrated.

DISCUSSION

Ankylosing Spondylitis (AS) is a multifactorial and polygenic rheumatic condition that results in deformity of the axial skeleton in which inflamation leads to bone formation in the form of enthesophytes and syndesmophytes. Calcification of the longitudinal ligaments further restricts normal spinal movement resulting in the classic “bamboo spine” appearance.

This rigid spine functions like a long bone is one key factor predisposing AS patients to spinal fractures (1,2). AS is also associated with osteoporosis that is attributed to an uncoupling of the bone formation and bone resorption processes.

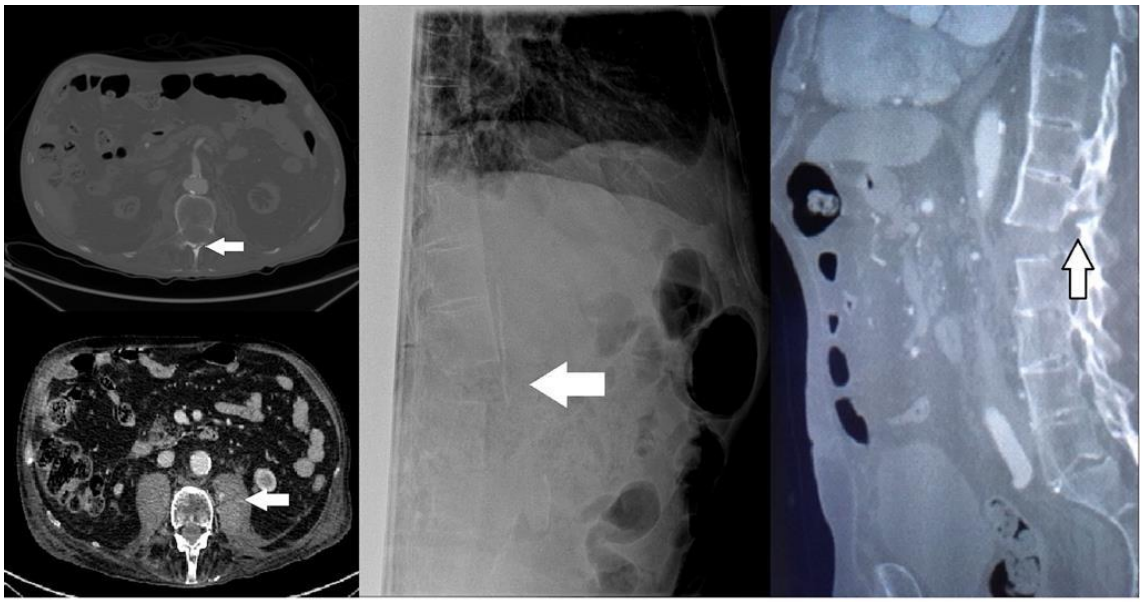
Therefore, bone resorption occurs and promotes weakening of the spine as well as increased risk of vertebral fractures which can be hugely different in terms of clinical relevance. Spinal fractures are up to four times more common in these patients and the incidence of spinal cord injury is approximately eleven times higher than in general population. Even in the presence of symptomatic clinical vertebral fractures, the diagnosis can be overruled by attributing the pain to disease activity.

Delay in diagnosis is not uncommon on the basis of radiography alone (given the highly abnormal structure of the spine), resulting in inappropriate immobilization and treatment. CT and/or MRI should be employed to confirm the diagnosis and possible complications. Both nonoperative and operative treatments can be employed depending on the patient's age, comorbidities, and fracture stability (3).

CONCLUSION

AS alters the biomechanical properties of the spine through a chronic inflammatory process, yielding a brittle, minimally compliant spinal column, worsened by osteoporosis. Consequently, these patients are highly susceptible being at risk to unstable spine fractures, known as Chalk stick fractures and sometimes associated neurologic

devastation even with minor trauma. Clinicians must maintain a high index of suspicion for fracture when evaluating this group to avoid morbidity and mortality.



Upper axial CT image shows posterior elements fracture of the L1 vertebra.
Down axial CT image shows a mild retroperitoneal bleeding in left psoas muscle.
Central image is a lateral X-ray where we can appreciate a disruption of the vertebral bodies
Right image is a sagital CT reconstruction that shows the three spinal columns involved in the unstable fracture.
There is also a calcification of the longitudinal ligaments

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