



Occult transverse L1 fracture presenting as unexplained kyphosis after liver transplantation: A Case Report

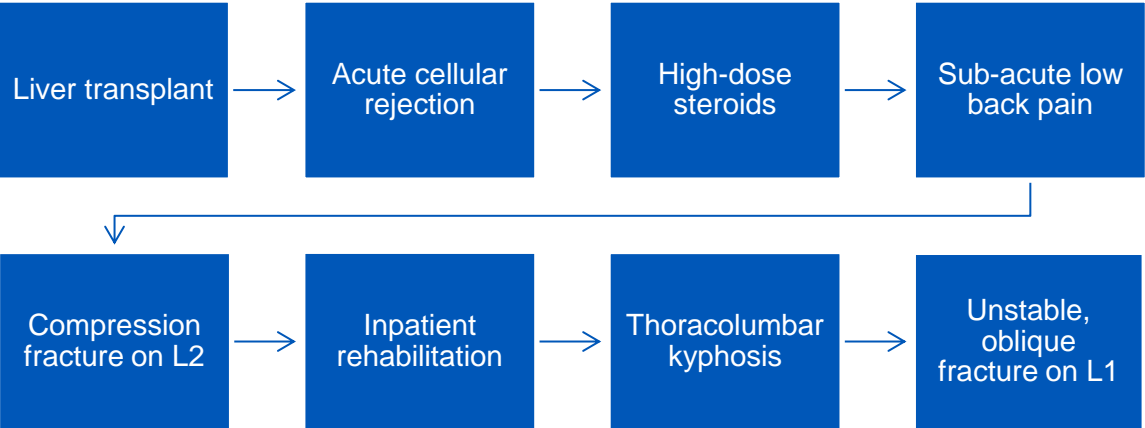
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INTRODUCTION

- Vertebral fractures are common and can result in acute and chronic pain, decreased quality of life, and diminished lifespan.
- Approximately 2/3 of vertebral fractures remain undiagnosed.
- Symptomatic and asymptomatic vertebral fractures have been shown to increase risk of future fractures in untreated patients.
- Main causes of fractures in the thoracolumbar spine are: high-energy trauma (young patients) and low energy trauma (older patients).

CASE

- 68 year old male with medical history of hypertension, obstructive sleep apnea and chronic low back pain who underwent liver transplant secondary to nonalcoholic steatohepatitis-induced cirrhosis, and concomitant sleeve gastrectomy.
- Eight days after surgery, he developed acute cellular rejection requiring treatment with high dose steroids.
- Three weeks after his transplant, he reported worsening low back pain. Lumbar x-rays showed a stable superior endplate compression fracture on L2 and he was provided a soft corset for use when mobilizing.
- He was subsequently admitted to inpatient rehabilitation. At the time of admission he was severely limited by pain.
- Once pain control improved and mobilization was feasible, a significant thoracolumbar kyphosis was noted. A lumbo-sacral CT scan showed an unstable, oblique fracture on L1 that was not apparent on previous radiographs.



IMAGING



DISCUSSION

- An oblique burst-like fracture leading to an unstable spine is often associated with high-energy direct trauma seen in severe falls and motor-vehicle accidents.
- A limited number of cases have been reported where these fractures occur in the setting of high impact in contact sports.
- Despite patient’s complex medical course and high dose steroid infusion, he did not experience a fall or traumatic event to justify this type of injury, nor did he exhibit worsening neurological findings compared to baseline.
- Patient was treated conservatively with TLSO and pain management given he was a poor candidate for surgery.
- A possible explanation for this phenomenon is an acute steroid-induced osteoporosis.

CONCLUSIONS

- A thorough physical examination and history can lead to early identification of occult, acute issues among complex post-transplant patients.
- Special precautions should be taken with these patients in order to improve outcomes in the inpatient rehabilitation setting.

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