

Fast SE (FSE) and fast recovery fast spin echo-accelerated (FRFSE-XL)

Each echo in FSE is spatially encoded so multiple k-space lines can be acquired in the same TR. The number of echoes acquired per TR is called echo train length (ETL). The total imaging time is reduced by ETL factor. Image contrast is determined by (effective) TE of the echoes corresponding to central k-space lines. It has shorter scan time and increased T2 weighting

The fast recovery (FR) feature is designed to enhance the intensity of fluids that have long T2 relaxation times, while using a shortened TR time. The shortened TR time makes the high resolution images practical.

2D FRFSE-XL applications

- PDW and T2W spine imaging
- Abdominal breath hold imaging
- Head and joint imaging

3D FRFSE applications

- High-resolution MRCP or myelogram imaging
- T2W spine and IAC imaging

A case of compression fracture of vertebrae

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"Fast spin echo (FSE) and fast recovery fast spin echo-accelerated (FRFSE-XL) are effective techniques for the visualisation of fractured vertebrae"

Patient history

- Pain in the back bone

Technique & findings

Sagittal T2, STIR and T1, Axial T2 and T1 imaging was performed. A wedge compression fracture of D12 and L2 vertebrae was noted. No compression of spinal cord was observed.

Provisional diagnosis

Compression fracture causing mild kyphotic deformity of spine.



Sagittal T2



Sagittal T1





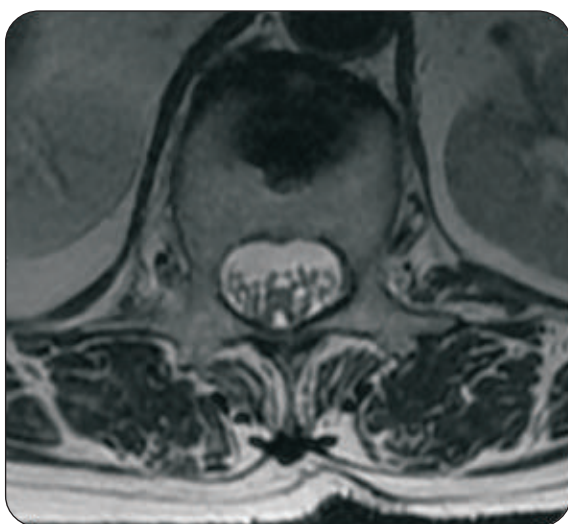
Sagittal STIR



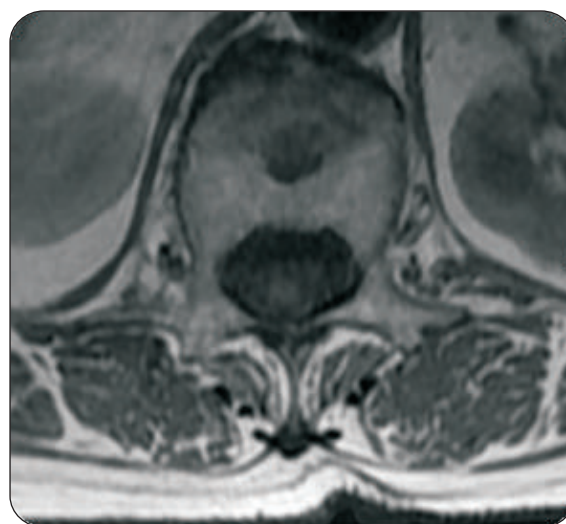
Sagittal T1



Sagittal T2



Axial T2



Axial T1

Conclusion

FSE and FRFSE-XL are excellent diagnostic aids for the visualisation of the spine.

Image courtesy to Asiri Surgical Hospital

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