QRG: Emergency Department Pathway for Thoracic and Lumbar Fractures

Greater Manchester Major Trauma Network

Northern Care Alliance NHS Group

Spinal fracture identified on plain film/CT

PATHWAY NOT SUITABLE FOR PMH OR RADIOLOGICAL EVIDENCE OF FUSED SPINE (E.G. DIFFUSE IDIOPATHIC SKELETAL HYPEROSTOSIS OR ANKYLOSING SPONDYLITIS)

Major Trauma
(with new motor neurology)

Follow regional and national Major Trauma guidelines/protocols

Low Energy/ No Trauma
(e.g. simple trip/fall from standing height, heavy lifting, prolonged/forced flexion or incidental finding)

- Lumbar Transverse Process Fracture(s)
- Single-Level Spinous Process Fracture
- Single-Level Endplate or Wedge Fracture
- Posterior Wall, Pedicle or Laminar Involvement
- Multiple Spinous Process Fractures

Neurological Examination

New myotomal weakness?

No → Follow Green Pathway

Yes → MRI scan → Follow Red Pathway

Any clinical concern not specifically covered by this pathway, please refer for advice via Patient Pass
https://patientpass.srft.nhs.uk

Consider further investigations* into pathological cause in atraumatic/incidental spinal fractures

*Suggested Bloods:
- FBC
- CRP
- LFTs and Bone Profile
- Vitamin D
- Myeloma Screen
- PSA (in males)

Consider MRI scan

Spinal Low Trauma Fracture Pathway v2.4 (2023). T Watt, D Van Popta, M Smith, C Choi, N Yasin, M Angus

QRG: Emergency Department Pathway for Thoracic and Lumbar Fractures

Greater Manchester Major Trauma Network

Northern Care Alliance NHS Group

Green Pathway

Management

SPECIALIST SPINAL INPUT NOT REQUIRED

Analgesia
Mobilise
Avoid bracing if possible – brace only as an adjunct for pain control

Patient Advice

Postural advice**
No restrictions to mobility
Graded return to work
Pain for 6-12 weeks
Avoid heavy lifting for 3 months in wedge/endplate fractures
Avoid contact sports for 3 months
If provided with brace, give advice including skin care, removal at night and weaning after 6 weeks

Advice for GP

Address bone health/FLS referral as per local guidelines
Physiotherapy locally only if persistent symptoms

Red Pathway

Management

Analgesia
Spinal Precautions with pressure area care
Spinal referral via Patient Pass

**Postural Advice

- Maintaining a good posture and avoiding 'slouching' – in standing, walking and sitting.
- Avoid activities in a flexed (bent forward) posture
- Avoid sitting in one position for more than 30-60 minutes. Take breaks to stand up, walk around, and change position.

Further advice available: https://theros.org.uk/information-and-support/osteoporosis/spinal-fractures/

Considerations

1. Pain prevention: through appropriate analgesia, in occasional cases a brace can be used for pain relief for 6 weeks but this not required for stability or prevention of kyphosis. The use of brace depends on pain. If a brace is used, this is not followed up by the spinal team and will require local orthotic input/follow-up.
2. Rehabilitation: through physiotherapy by providing early mobilisation to prevent bone and muscle loss as well as risks associated with immobilisation, though a short period of rest may be required. The aim of physiotherapy is for early posture management to prevent hyperkyphosis of thoracic and loss of lordosis in the lumbar spine, as well as prevention of falls, improving axial strength and rehabilitation to help maintain the correct posture/spinal alignment. This does not require specific or special spinal physiotherapy; Lifting and bending excessively should be avoided for 6-12 weeks.
3. Investigation: to rule out other causes that may cause pathological fracture where appropriate. This may include blood tests such as myeloma screen, bone profile, blood count etc as well as MRI if local team suspect underlying malignancy. A specific MRI is not required for the spinal team to determine stability and the need for MRI scan is based on your local suspicion of an underlying malignancy or pathological process. If you do not suspect malignancy or other non-osteoporotic/traumatic process then there is no absolute indication for this.
4. Prevention: of future fractures by following the advice from the National Osteoporosis Guideline Group or local policy.

Spinal Low Trauma Fracture Pathway v2.4 (2023). T Watt, D Van Popta, M Smith, C Choi, N Yasin, M Angus