The protocol was reviewed and agreed upon by EM, Neurosurgery, Orthopedic Surgery, Trauma Surgery, and Radiology

THORACIC or LUMBAR Compression / Superior & Inferior Endplate Fracture: *REVIEW EXCLUSION CRITERIA BEFORE ENTERING PATHWAY

EXCLUSION CRITERIA

- **CERVICAL** fractures
- **BURST / two column** fractures
- **INTUBATED** patients
- New retropulsion (any degree)
- New neurological deficits
- Diffuse idiopathic skeletal hyperostosis (DISH)
- Ankloysing spondylitis (AS)
- Malignancy associated fracture (metastatic or primary)
- Unable to complete upright x-xrays

Consult Spine

Was a CT of the affected level performed?

Order CT of the affected area

- CT Thoracic spine w/o contrast
- CT Lumbar spine w/o contrast
- CT Cervical spine w/o contrast
- CT Total spine w/o contrast
- Standard practice is to order a CT Traumagram with contrast on all Trauma patients
  - CT Head Cervical Spine w/o
  - CT trauma chest/abd/pelvis T/L spine w contrast
- In special or extenuating circumstance, the ED attg can initiate a clinical discussion with the trauma attg directly

No

Yes

Acute Fracture / Age Indeterminate or Subacute/Chronic?

Subacute/Chronic

- Upright xrays **without** a brace
  - Upright lumbar spine xrays
  - Upright thoracic spine xrays

Acute / Age Indeterminate
(also includes patients with acute pain or equivocal radiology reads i.e. "acute vs subacute")

- > 50% height loss OR
- New angulation or kyphotic deformity OR
- Any retropulsion

No

Yes

<50% height loss | NO new angulation or kyphotic deformity | NO retropulsion

- Upright xrays **without** a brace
  - Upright lumbar spine xrays
  - Upright thoracic spine xrays

>50% height loss OR New angulation or kyphotic deformity OR retropulsion

- Consult Spine

Read as **unchanged** by radiology (NO worsening angulation/height loss/kyphotic deformity)?

Unchanged

Worsening

Unchanged from prior imaging on radiology read & pain controlled

- Discharge home & educate patient
  - PRN pain control
  - PRN Brace for comfort (Quickdraw or soft TLSO)
  - Refer to PCP for follow up or help patient establish PCP care
    - Post ED Follow Up Pathway (for patients DC from the ED)
  - **Pain usually lasts 8-12 weeks**
  - **Physical therapy may be helpful**
- Pain not controlled
  - Consider medicine admit if no other injuries
  - If admitted to trauma, pain management per trauma

Worsening height loss OR worsening angulation OR worsening kyphotic deformity

- Consult Spine

References

- Vaccaro AR, Lehman RA, Jr., Hurlbert RJ, et al. A new classification of thoracolumbar injuries: the importance of injury morphology, the integrity of the posterior ligamentous complex, and neurologic status. Spine. 2005;30(20):2325-2333
- Vaccaro AR, Zeiller SC, Hulbert RJ, et al. The thoracolumbar injury severity score: a proposed treatment algorithm. J Spinal Disord Tech. 2005;18(3):209-215.