Hangman's fracture

- Most common cervical spine fracture.
- Classically it is an extension-fracture as the hangman puts the knot under the chin to produce maximal extension-force.
- In some situations however it can also be the result of extreme flexion.
- Common in diving accidents.
- Although considered an unstable fracture, it seldom is associated with spinal injury, since the anteroposterior diameter of the spinal canal is greatest at this level, and the fractured pedicles allow decompression.
- When associated with unilateral or bilateral facet dislocation at the level of C2, this type of hangman's fracture is unstable and has a high rate of neurologic complications.

Hangman' s fracture

Hangman's Fracture

- Traumatic Spondylolisthesis of the Axis
- Bilateral fracture of the pars interarticularis or isthmus and / or adjacent articular processes
- 4-7% of all cervical fractures or dislocations
- Most frequent # in fatal traffic accidents
- Clinical cases result from hyperextension
- Neurologic involvement is rare
- Predictive factors for neurologic injury:
  - Type II and III
  - Locked facets
  - Involvement foramina with osseous fragment:
    - Dissection
    - Embolization

Classification

- **Type I** (65%)
  - hair-line fracture
  - C2-3 disc normal
- **Type II** (28%)
  - displaced C2
  - disrupted C2-3 disc
  - ligamentous rupture with instability
  - C3 anterosuperior compression fracture
- **Type III** (7%)
  - displaced C2
  - C2-3 Bilateral interfacet dislocation
  - Severe instability