

Cervical Spinal Cord Injury



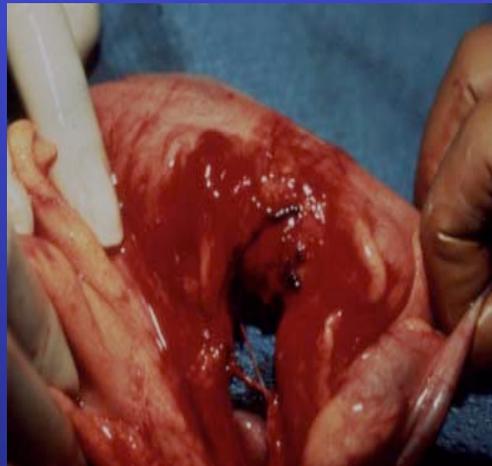
- SCI without radiographic abnormality
- Typically in children 1.5-16yrs due to increased elasticity of spinous ligaments and paravertebral soft-tissue in young patients
- Frequently associated with a “latent period” of sensorimotor dysfunction (30 minutes-4 days)



Belt-induced Injuries



Lap Belt Ecchymosis



Ruptured Intestine



Chance Fracture

“Chance” fractures

“Seat-belt fractures” –

- lap belt and no shoulder harness
- unrestricted distraction and forward flexion of the rest of the spine
- lower thoracic and lumbar spines

Flexion-distraction



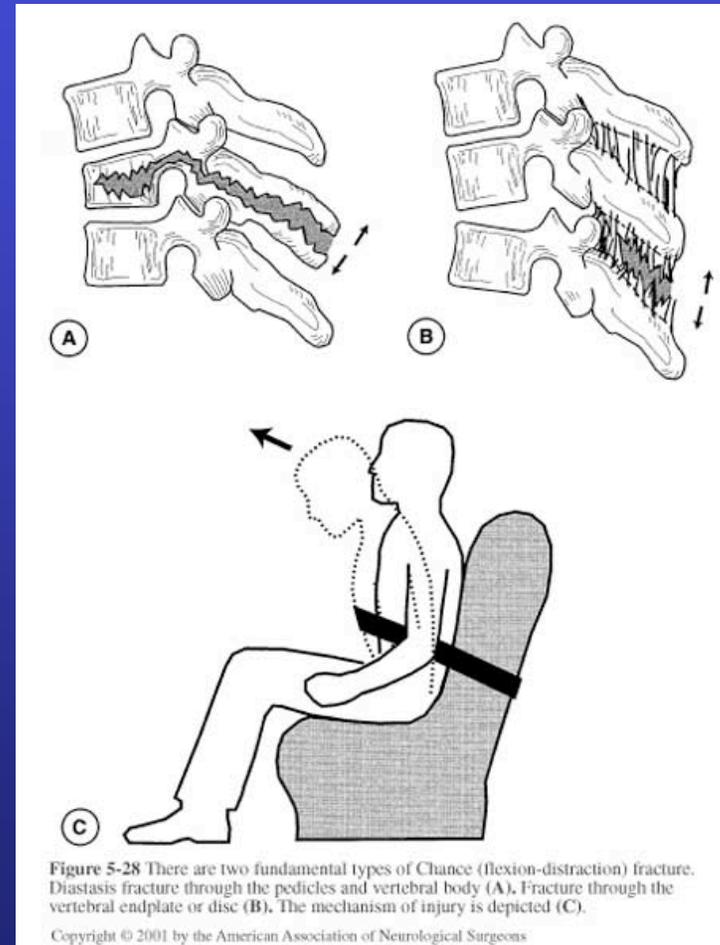
“Chance” fractures

Type A

diastasis through the pedicle

Type B

fracture through the vertebral endplate and ligaments of the intervertebral space



Real World Consequences of Misuse



Real Kids with Real Injuries

1994 Ford Tempo



- center-rear passenger
- 18-month-old female
- 32 in tall, 28 lb
- 2-point manual belt used with forward facing child safety seat
- child safety seat harness straps placed through slots for use as a rearward facing infant restraint