

## COMPLEX SACRAL FRACTURE WITH DELAY CAUDA EQUINA SYNDROME

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**Introduction:** Sacral fractures are a rare entity, incidence as low as less than 2% of all spinal fractures. Many times it is clinically unrecognised in major pelvic fractures due to distracting pain. In trauma setting, the quality of the radiograph is not adequate causing difficulty in diagnosing rare type of sacral fracture. Most neurological insults associated with delays in diagnosis and can range from incomplete injury to involvement of the entire cauda equine.

**Discussion:** 25 years old gentleman was brought to ED for low back pain following motor vehicle accident. On examination, there is minimal tenderness at sacral region without major motor deficit or hypoesthesia. Patient was admitted to observation ward, where he developed acute urinary retention. Not much information from pelvic radiograph, due to air in the bowel. Ct scan of sacrum showed s1-s3 fracture with severe spinal canal stenosis at the level of S3/S4. Due to urinary retention, urgent mri was done and showed S1-S3 vertebral body fracture with nerve root compression.

**Conclusion:** Sacral fractures commonly results from high-energy trauma and generally occur in combination with pelvic rim or major fractures. Isolated fractures or transverse fracture of the sacrum are rare. Nerve injury in isolated sacrum injury caused by angulation, instead of pure vertebral displacement (1). Patients who have only a sacral fracture will not develop extensive paralysis, as muscles of the lower limb are supplied by nerve roots, predominantly above S2. Other associated injuries should be suspected if such paralysis exists. Neurological deficit in sacral fracture mainly involve bowel or bladder and the deficit may not be apparent immediately after the injury. It is difficult to diagnose in minimally displaced fracture of poor quality radiograph, as it often hidden by gas or vascular calcification. Patient with high suspicious of sacral fracture should undergo CT scan to confirm the diagnosis (2).