

NEGLECTED TYPE 2 ODONTOID FRACTURE with NON-UNION

DR KIRAN K TAPAL
FNB SPINE FELLOW
PARK CLINIC

History

- 26 year male
- c/o weakness in all four limb with neck pain since 45 days
 - History of RTA before 45 days
 - head injury with loss of consciousness, weakness in all four limb and knee injury
 - conservative management done at other hospital for head and knee injury
 - after 1 month on reevaluation done for by other doctor for weakness in all four limb and referred at park clinic

 - presented with
 - weakness in all four limb
 - which was remain same since after gaining consciousness
 - right now he was bedridden, cannot grip any object
 - neck pain
 - with torticollis on rt side and restricted neck movement
 - pain aggravated with any movement
- n/h/o
 - previous h/o neck pain/difficulty in walking/urination/ fine movement of hand
 - fever or cough suggesting upper respiratory track infection

Examination

- **General examination**
 - Conscious and co-operative
 - Head--- healed scare on frontal head
 - eye and vision : normal
 - vital stable
 - No anemia
- **Spine Examination:**
 - Attitude: neck rt side torticollis with supine and flexer attitude of lowerlimb
 - Tenderness on upper part of posterior aspect of neck
 - Sternocledomasoid muscle palpation: spasm on lt side
 - Neck movemnt examination avoided
- **Hand Examination:**
 - Wasting of hand muscle both side
 - finger abduction test positive on both side
 - unble to do grip/realease

Neurological examination

- Higher function normal
- cranial nerve examination: normal
- Tone: increase in upper and lower-limb (spasticity)
- Power:
 - Upper limb
 - Rt side shoulder,elbow,hand 3/5
 - Lt side shoulder elbow hand 1/5
 - Lower limb-
 - Rt side-hip knee 3/5, ankle 1/5
 - Lt side hip knee 3/5 ankle 0/5
- Co-ordination can not be tested
- Reflex:
 - jaw jerk: absent
 - Bicep, tricep and brachi radialis:+++
 - knee ankle: +++
 - Hoffman reflex: present on both side
 - Abdominal reflex: absent
 - Planter: Extensor both side
- Sensation: Touch and pain and joint position sense decrease below C-2

summery

- 26 year male
- post traumatic upper cervical instability and myelopathy
- neurological level C2
- Vertebral level C2

D/D

- Fracture
- congenital anomaly -os odontoidium/basilar invagination, assimilation of atlas with AAD etc

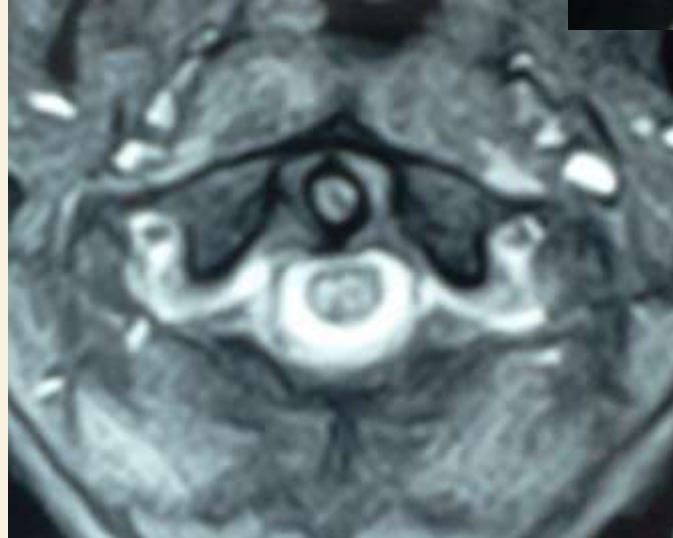
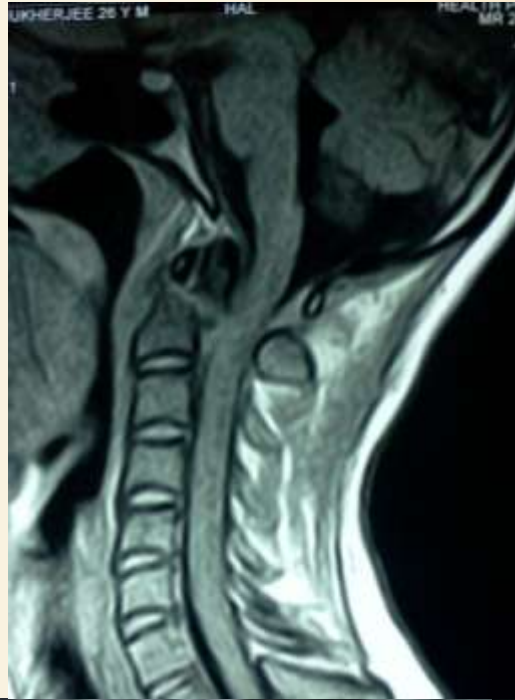
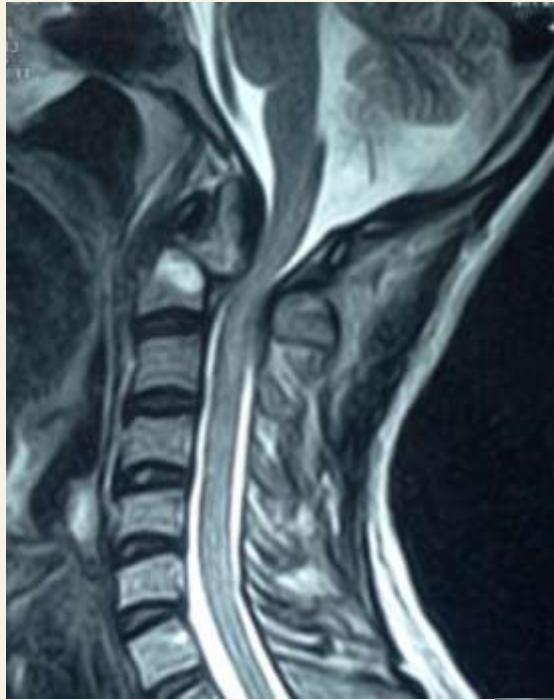
Investigation-X ray



Investigation CT scan



Investigation-MRI



Diagnosis

- 26 year male,
- non-union of type 2 odontoid fracture,
compressive myelopathy

Plan of management

- Cervical traction for 3 days
- posterior surgery

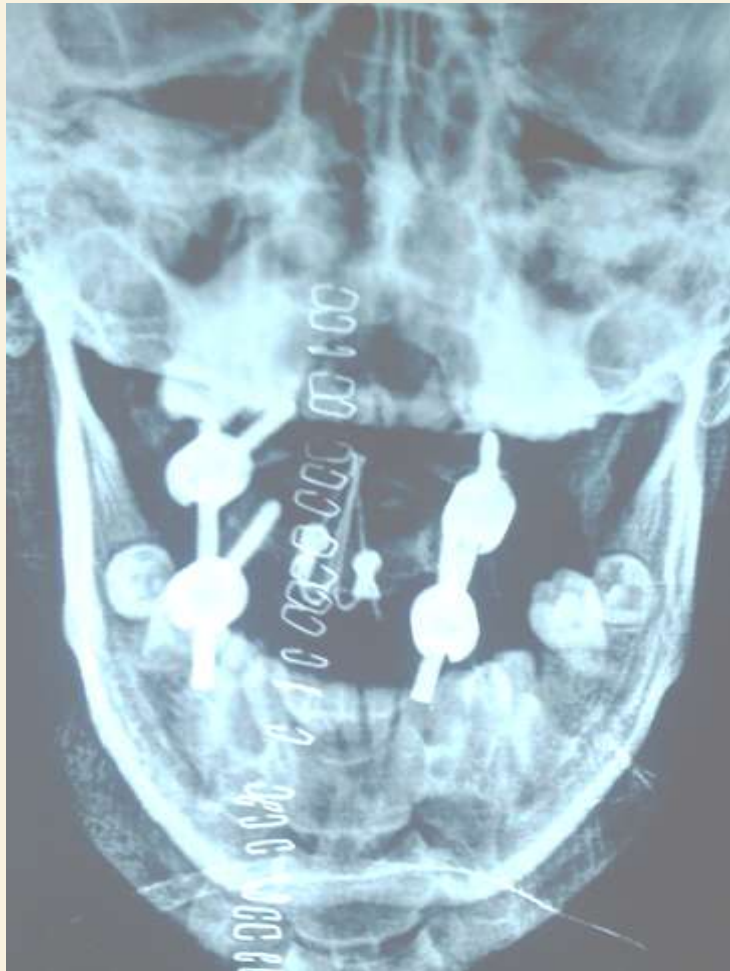
Image after traction



Options for modality of surgery

- Posterior surgery
 - Transarticular fixation and C12 fusion
 - C1 lateral mass and C2 pedicle screw fixation and fusion
 - semirigid fixation
- Anterior surgery
 - Odontoid screw fixation
 - odontoidectomy and C1/2 transarticular fixation anterior/posterior

Surgery:



Clinical status at post operative day 2

- Neurology:
 - conscious cooperative
 - cranial nerve examination normal
 - reflex same
 - power upperlimb 4-/5 on rt side
3/5 on lt side
lower limb 4-/5 on both side