

INTRODUCTION

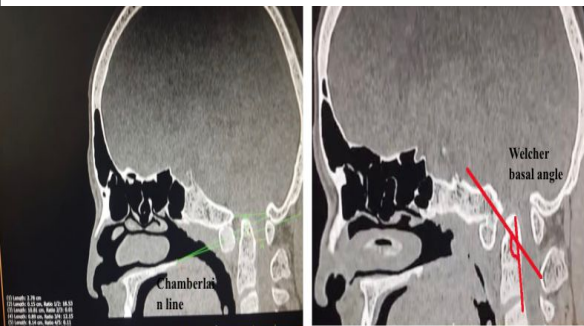
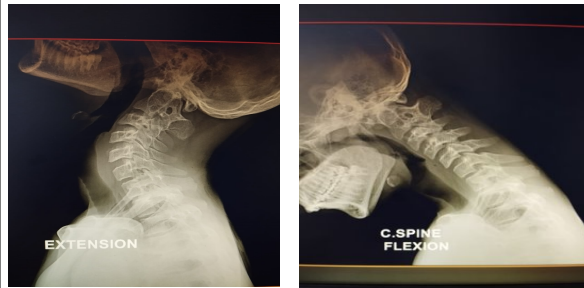
- CASE HISTORY:** A 40yr old male patient came to the OPD with neck pain since 2 months, it is sudden in onset and dull in nature which is associated with neck weakness and dizziness.
- On general examination:** unremarkable except for short neck since birth. Rest of spine is normal, any spinal deformities and anomalies not noted.
- CNS examination:** Cranial nerves intact, sensory and motor examination are normal , deep tendon reflexes are normal

AIMS / OBJECTIVES

- To describe the radiological imaging findings of this case.
- Role of radiological imaging in the management of the case.

MATERIALS / METHODS

- A Cervical spine Xray using Allengers 525-FLMT at 60 kVp and 40 mAs in neck extension and flexion position while standing was done . AP and lateral film views were not available.
- CT head and neck with 3D reconstruction was performed using SIEMENS16 slice somatom scope.



RESULTS & DISCUSSION

Radiograph Findings: 1)C1 partially fused to occipital condyles with C2 dens hypertrophy and mega spinous process noted. 2)A small lucency in the C2 arcuate foramen for vertebral artery also noted. **CT findings:** 1)The odontoid process of the axis and the anterior arch of the atlas were located 10mm above the Chamberlain line, which is drawn between the posterior pole of the hard palate and opisthion, suggestive of basilar invagination. 2)The Welcher basal angle was normal measuring 135 degrees. There is a reduction in the craniovertebral angle , suggestive of predisposition to anterior spinal cord compression. 3) Partial fusion of the lateral masses of atlas with the occipital condyles with occipital condyles with basilar invagination noted which results in kinking and compression of cervicomedullary junction.

DISCUSSION: Atlanto-occipital assimilation or occipitalisation is a partial or complete congenital fusion between the atlas and the occipital bone, ranging from a complete bony fusion to a bony bridge, or a fibrous band uniting one small area of the atlas to the base of the occiput 2)Occipitalisation can also lead to chronic atlantoaxial instability and basilar invagination. 3) Patients with this condition often have low hairlines, short necks, and restricted neck movements . 4)It is **associated** with fusion of C2-C3, basilar invagination, cleft palate,cervical ribs, urinary tract anomalies and cranio-cervical instability. 5)Patients presenting with minor symptoms or who become symptomatic after a minor trauma, heavy travel, or physical exertion may be treated non-surgically

CONCLUSION

- If neurological symptoms occur, surgical decompression may be necessary. When radiological evidence of atlantoaxial instability is concomitantly present, surgical decompression with occipito-cervical fusion has been widely recommended.
- This case was **diagnosed** with Atlanto occipital assimilation with basilar invagination with short neck as a predisposing factor and Since there were no symptoms of spinal compression, he was **treated** non operatively with medications and advised the use of hard cervical collar. **Patients with atlantooccipital assimilation (with or without radiological evidence of basilar invagination and atlantoaxial instability), who do not present with signs of cervical cord compression, must be offered an unbiased non-operative treatment plan before considering surgical intervention.**