

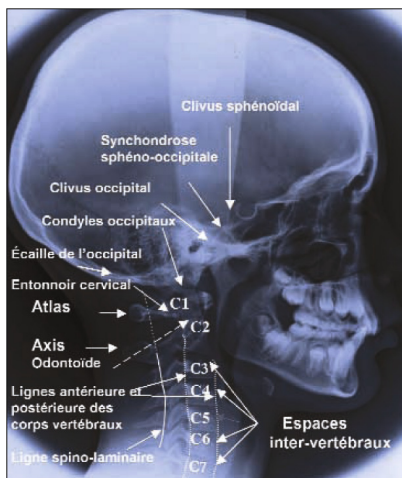
ORTHOPRACTICE SECTION

Cephalometric analysis of the cervical spine

Jean-Michel SALAGNAC

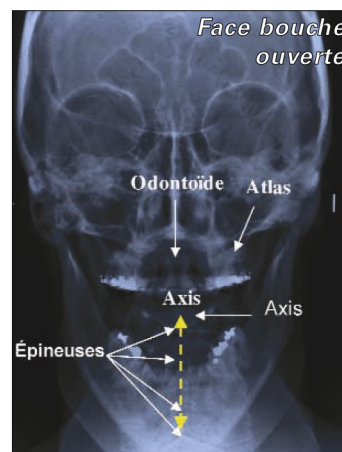
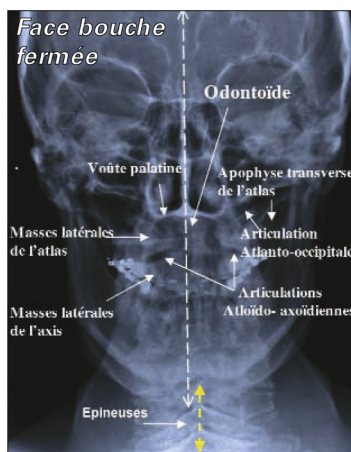
In response to questions from readers of our n° 4-2007 of the Revue, which was devoted to the cervical spine, J-M Salagnac presents this study of four cephalometric films with his commentary on them.

STRUCTURAL STUDY OF THE PROFILE OF THE CERVICAL SPINE AND BASE OF THE CRANIUM



- 1 - Count the vertebrae
- 2 - Look for morphological anomalies of the vertebrae
- 3 - Assess the alignment of vertebral bodies
- 4 - Assess the alignment of the spinous processes
- 5 - Assess the distribution of intervertebral spaces
- 6 - Look for vertebral blockage
- 7 - Look for Atlas-occipital fusions
- 8 - Evaluate the position of the summit of the dental hard palate
- 9 - Look for anomalies in the occipital clivus
- 10 - Assess the orientation of the occipital clivus / sphenoid clivus
- 11 - Assess the angle of the mandible / anterior-inferior angle of the odontoid

STRUCTURAL ANALYSIS OF THE FRONTAL VIEW OF THE CERVICAL SPINE

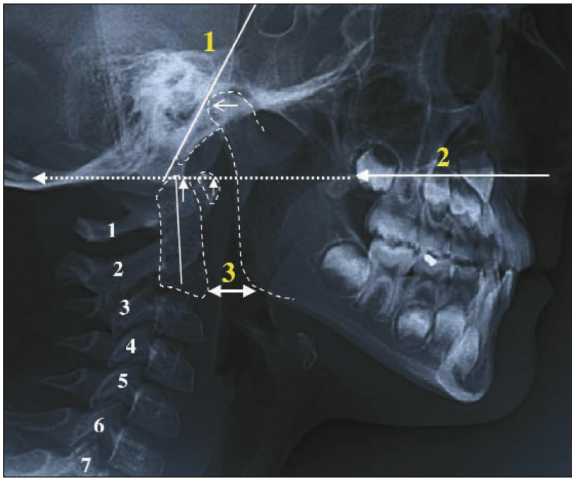


Look for:

- asymmetries in the occipito-vertebral hinge
- asymmetries in the lateral atlas masses
- odontoid anomalies
- the alignment of spinous processes with the median sagittal plane

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CEPHALOMETRIC ANALYSIS OF THE PROFILE OF THE CERVICAL SPINE



1 - Trace the line of the clivus

assess:

- the position of the condyles
- the situation of the odontoid

2 - Trace the palatal plane

Extend it backward,

assess:

- the situation of the odontoid summit
 - the situation of the anterior arch of the atlas
- => look for a basal depression

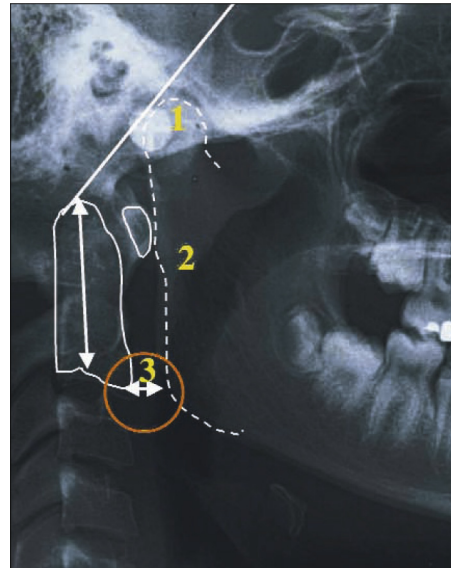
3 - Assess the situation of the mandibular angle and the anterior-inferior odontoid angle.

NORMAL CEPHALOMETRIC RELATIONSHIPS IN PROFILE BETWEEN THE BASE OF THE CRANIUM, THE CERVICAL SPINE AND THE MANDIBLE

- 1 - The condyle does not exceed the line of the clivus distally.
- 2 - The posterior edge of the ascending branch of the mandible is close to the anterior arch of the atlas and should not be superposed on the image of the odontoid.
- 3 - The mandibular angle is located opposite the anterior-inferior angle of the odontoid.

When an anomaly in the vertical situation of the mandibular angle / anterior-inferior angle of the odontoid is found, look for an anomaly in:

- the condylic unit (hypo or hypercondylicus);
- the base of the cranium: hypodevelopment of the basioccipital;
- the occipital hinge: basal depression, occipitalisation of the atlas;
- the vertical and anterior-posterior situation of the odontoid-TMJ distance.



FURTHER READING

- Rev d'O.D.F. Vol. 41, n° 4, décembre 2007.