AO Spine Classification Of Upper Cervical Spine Injuries: It`s Really that Simple!

Naga Ramesh Chinapuvvula MD,
Patel Rajan MD, Bawa Pritish MD,
Beckmann Nicholas MD, Suresh Cheekatla MD,
Khanpara Shekhar MD

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AO Spine Upper cervical Spine Classification System

Occipital condyle & craniocervical junction
- A- Isolated bony injury (condyle)
- B- Non-displaced ligamentous injury (craniocervical)
- C- Any injury with displacement on spinal imaging

C1 ring and C1-2 joint
- A- Isolated bony injury (arch)
- B- Non-displaced ligamentous injury (transverse atlantal ligament)
- C- Atlantoaxial instability/Translation in any plane

C2 and C2-3 joint
- A- Bony injury only. No ligamentous, tension band or discal injury
- B- Tension band/Ligamentous injury +/- bony injury
- C- Any injury that leads to vertebral body translation in any directional plane

- Neurological status modifier
- Case-specific modifiers

Proposed by the AO foundation in 2018

Occipital condyle and Craniocervical junction

**OC- A: Isolated bony injury**
- Occ condyle fx
- Normal CCJ alignment
- No ligamentous injury
- Normal alar ligaments

**OC- B: Non-displaced ligamentous injury**
- Normal CCJ alignment
- Rt Alar Ligament Sprain
- Normal CCJ alignment
- Rt Alar Ligament Sprain

**OC- C: Any injury with displacement**
- Atlanto-occipital dissociation
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C1 ring and C1-2 joint

C1-A: Isolated Bony injury

C1-B: Nondisplaced ligamentous injury

C1-C: Atlantoaxial instability/Translation in any plane
C2 and C2-3 joint

C2-A: Isolated Bony injury

C2-B: Tension band/lig injury +/- bony injury

C2-C: Any injury with vertebral translation

Classification Nomenclature

For eg: Bilateral atlanto-occipital dissociation + complete cord injury is represented as follows:

OC Type C, N4

Primary Injury

Neurologic status & modifiers