Fielding Classification for Atlanto-Axial Subluxation

- Traumatic atlantoaxial rotatory fixation in adults: a systematic review of published cases
- Management of Adult Atlantoaxial Rotatory Fixation: Case Series with Literature Review
- C2 Odontoid Fracture Associated with C1-C2 Rotatory Dislocation: A Retrospective Analysis of 2 Surgical Techniques
- New Subtype of Atlantoaxial Rotatory Fixation (Type IIIa)
- Traumatic atlanto-axial rotatory subluxation and dens fracture with subaxial SCIWORA of Brown-Sequard syndrome: A case report
- Atlantoaxial rotatory subluxation/fixation and Grisel's syndrome in children: clinical and radiological prognostic factors
- Surgical treatment for atlantoaxial rotatory fixation in an adult with spastic torticollis: A case report
- Surgical Therapy of Fixed Atlantoaxial Rotatory Dislocation - Monocentric Study of 15 Patients

The Fielding classification is commonly used to categorize atlantoaxial subluxation based on the degree of displacement and the associated neurological or ligamentous damage. This classification system is primarily used to assess subluxations that occur due to trauma or inflammatory diseases, particularly in cases of rheumatoid arthritis or other conditions that lead to instability in the cervical spine.

Fielding Classification for Atlanto-Axial Subluxation:

The Fielding classification consists of four types based on the extent of displacement between the atlas (C1) and axis (C2):

1. **Type I:**

   1. **Description:** Mild subluxation.
   2. **Displacement:** No significant displacement or very minimal displacement between the C1 and C2 vertebrae (less than 5 mm).
   3. **Treatment:** Conservative management with physical therapy, neck immobilization, and close monitoring.
   4. **Instability:** Minimal to no instability.

2. **Type II:**

   1. **Description:** Moderate subluxation.
   2. **Displacement:** Moderate anterior displacement of the C1 on C2 (between 5 mm and 10 mm).
   3. **Treatment:** May require more aggressive conservative management or surgical intervention if instability persists or neurological symptoms develop.
   4. **Instability:** Mild to moderate instability with possible neurological compromise.

3. **Type III:**

   1. **Description:** Severe subluxation.
   2. **Displacement:** Significant displacement of the C1 on C2 (greater than 10 mm).
   3. **Treatment:** Surgical stabilization is often required to avoid spinal cord compression and neurological deterioration.

4. **Instability:** Severe instability with potential neurological deficits.

4. **Type IV:**

1. **Description:** Severe subluxation with rotational deformity.
2. **Displacement:** C1 may be displaced and rotated relative to C2.
3. **Treatment:** Surgical intervention is urgently required to restore alignment and stabilize the cervical spine.
4. **Instability:** High risk of neurological injury due to rotation and displacement.

Key Considerations: - The **Fielding classification** focuses on **displacement** and **instability** of the atlanto-axial joint. - **Treatment** strategies vary significantly based on the degree of displacement, ranging from conservative management in mild cases (Type I) to urgent surgical intervention in severe cases (Type III and IV). - This classification is useful for **trauma**, **rheumatoid arthritis**, and other conditions affecting the cervical spine, but it is not typically used for congenital atlanto-axial subluxation.

In summary, the **Fielding classification** provides a framework for evaluating atlanto-axial subluxation, which helps guide treatment decisions and prognostic planning based on the extent of displacement and associated instability.