The management of rheumatoid cervical disease

The cervical spine is the most commonly involved segment of the spine in RA patients. The most common manifestations are:

A. **Atlanto-axial instability**: develops in **25%** and due to loss of strength laxity and destruction of transverse ligament and atlantoaxial joints which leads to backward movement of the dens and increase in Atlanto dental interval and possibly cervicomedullary compression.
B. **Cranial settling** (basilar invagination) develops in **12-20**% and characterized by upward migration of dens through foramen of magnum and telescoping of the anterior arch of C1 on C2. It is due to erosion and loss of bone from the lateral masses of C1. In severe cases the condyles may rest on lateral masses of C2.
C. Compression of the spinal cord by the **pannus** (granulation tissue mass that can destroy the dens
D. **Subaxial subluxation**. Staircase appearance if multiple levels are involved (**17-29**%

- Surgical options : The treatment goals are relief of the compression and stabilization of the spine

1. Reducible subluxation and settling are treated with cervical traction (11-12 lb for 4 days)-reduction is achievable in 80% of cases followed **posterior fusion using C1/C2 transarticular screw or subluminal wires** if C2 lateral mass is wide and the vertebral artery has normal anatomy (Not possible in 30%) or **occipitocervical fusion.**
2. Irreducible subluxation---- Transoral Tranpharyngeal decompression followed by occipito-cervical fusion if the general condition of the patient permits. This may carry high risk in malnourished bed ridden patient

- Cervical traction is contraindicated in patients with complex luxation and posterior occipitoatlantoaxial dislocations. It should be done with careful monitoring of the patient both clinically and radiologically.
- Management of rheumatoid patients is different from non rheumatoid patients
    1. Patients with rheumatoid arthritis have osteoporotic bone both from the disease and the long term steroids which makes instrumentation more difficult

    2. Patients with rheumatoid arthritis are on immunosuppressants which predisposes them to higher risk of infection particularly if Transoral excision of the pannus is performed

    3. Multiple level involvement (atlantoaxial and subaxial) may require long segment fusion