

## ADOLESCENT KYPHOSIS: Scheuermann's Disease

Fixed Round back deformity due to kyphosis in the thoracic spine.

Defect in the ring epiphysis of the vertebra.

Cause is not known.

Pathogenesis: Possible avascular necrosis of ring apophysis with premature fusion of the anterior ring and herniation of the nucleus pulposus through defective end plate causing Schmorl's node

Incidence 04%-8%; equal for both sexes

### Normal Kyphosis in thoracic spine [Fon]

Adolescent boy	25
Girl	26
Over	40° is significant

### Signs and Symptoms

5% incidence, ?AD

Usually in boys; at puberty

Progression of deformity: Patients perceptible and radiological assessment

Some patients may complain of pain

Neurological symptoms: rare

Look for : Spondylolisthesis and Scoliosis [30-50%]

Cardiopulmonary compromise only there is severe Kyphosis [more than 100°]

Differential diagnosis: Postural Kyphosis [Kyphosis is flexible]

### Radiology

Lower thoracic vertebral involvement T7-12

5° wedging of 3 vertebra

or thoracic Kyphosis more than 45°

Schmorl's nodule

Irregularity of endplate [anterior half]

Decrease disc space

### Treatment

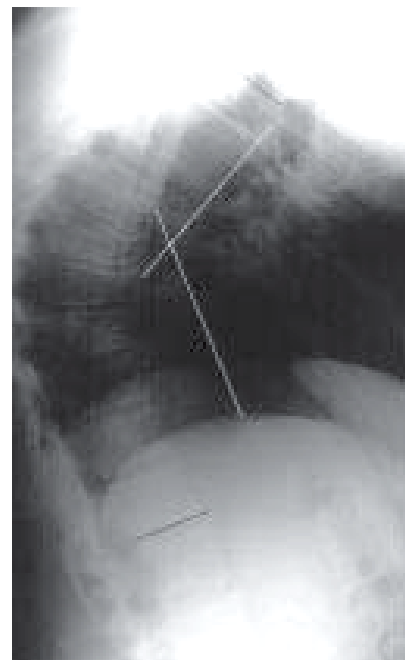
Majority requires only symptomatic treatment.

Stretching exercises should be encouraged

50-75°: Milwaukee brace is indicated in adolescent

>75° : Flexible Posterior stabilization

>75° and rigid >50° : requires anterior release and posterior instrumentation



## **Scheuermann's in Adults**

Pain is a predominant symptom; is due to development of spondylosis and can be refractory to non-operative treatment

Rarely increased deformity and neurology

Pseudo Scheuermann's: lumbar. Pain is the problem.

Increased Cervical and lumbar lordosis to compensate for thoracic vertebra and both sagittal and coronal balance is well preserved.

Natural history is difficult to discern

MRI reveals disc degeneration 5 fold more than normal population

Untreated Scheuermann's more pain and deformity in adult life