Case Report

A delayed presentation of scheuermann's disease in a female

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Low back pain is a common concern, affecting up to 90% of people at some point in their lifetime. Low back pain is not a specific disease, rather it is a symptom that may occur from a variety of different processes. Common causes of lower back pain in young adults are lumbar disc herniation, degenerative disc disease, isthmic spondylolisthesis, musculoskeletal pain syndrome, osteomyelitis of spine, cauda equina syndrome and referred pain from abdominal organs. Scheuermann's disease, more commonly seen in western countries, is also one of the differentials.

[*J Indian Med Assoc* 2019; **117:** 31-2]

***Key* words : Low back pain, Scheuermann's disease.**

Scheuermann's disease, described by Holger Scheuermann in 1920, comparatively an unusual cause of severe lower backache unless in acute phase, is considered to be a form of juvenile osteochondrosis of the spine, most frequently diagnosed between ages 13 and 17 years with overall incidence rate of 0.4% to 10%, and commonly affecting males[1-3].

Here we report a case of late presentation of the disease in a 26 year old female with predominant complaints of severe lower backache and radicular leg pain.

Case Report

A 26 year old female presented to Emergency Department with chief complaints of severe lower backache and radicular pain in right lower limb. She was relatively alright before 1.5 months when she started having episodic severe lower backache accompanied with pain in right lower limb. Pain was relieved on rest and analgesics. There was no history of weakness, trauma, fall, heavy weight lifting or any other complaints. Vitals and systemic examination including detailed neurological examination were unremarkable. Patient's hematological and biochemical profiles were normal. Her Lumbosacral spine Xray showed mild reduction in L3-L4 space. USG pelvis showed no abnormality.

Her MRI of lumbosacral spine showed Schorml's nodes formations in the lower dorsal and lumbar vertebrae with posterior bulging of L3-L4, L4-L5 & L5-S1 intervertebral discs with posterior osteophyte formation with hypertrophy of ligamentum flavum and arthropathy of facet joints. Scoliosis was seen in lumbar region with concavity to right side. Paradiscal degenerative changes were seen in antero-supeior portion of L4 vertebral body with fatty conversion of bone marrow.

The patient was given anti-inflammatory drugs and muscle relaxants (etocoxib and thiocolchiside) and pregabalin for 2 weeks and advised for extension spinal exercises. On follow after 1 month, patient was better with no backache or leg pain.

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Discussion

With two major forms of kyphosis: the thoracic form (classic, type I), which is the most common with the apex localized between T7 and T9 vertebrae and the thoracolumbar form (type II, uncommon), with the apex localized between T10 and T12, the cause of Scheuermann's disease remains unknown.

Since Scheuermann's disease occurs during periods of bone growth, it often first appears in adolescence at the time of puberty. Parents typically bring their child with a complaint of poor posture, sometimes with sporadic occurrences of fatigue and mild pain in the thoracic area of the spine. In severe cases, patients may have other symptoms including pain, a rigid curve of the spine that gets worse when bending forward and only partially corrects itself when standing, co-existent scoliosis and chest pain or difficulty breathing caused by decreased lung capacity; only in rare circumstances.

Scheuermann's disease is rarely associated with neurological complications. Neurologic deficits are usually secondary to thoracic disk herniation, kyphotic angulation and tenting of the spinal cord, extradural spinal cysts, osteoporotic compression fractures and vascular injury to the anterior spinal artery due to compression of the spinal artery of Adamkiewicz[4-6].

Radiographically anterior wedging of vertebral bodies, Schmorls's nodes, increased irregularities and densities of endplates with marked kyphotic deformity suggests Scheuermann's disease. Schmorl's nodes are the result of the penetration of nucleus pulposus material into the spongy vertebral body. This finding is frequent but not pathognomonic of the disease, since it can also be observed in normal individuals.

Bone scintigraphy findings are generally not pathognomonic, appearing as subtle increases in isotope uptake at the sites involved by the disease. Magnetic resonance imaging is used in the evaluation of neurologic deficits and intervertebral disk degeneration and atypical forms of Scheuermann's disease with nondiagnostic findings in standard radiographs. Preoperative selective arteriography of the spine may be of value to avoid injury of the anterior spinal artery. Additional imaging studies should include passive hyperextension views, lateral tomograms, radiographs of the left hand and wrist, and standing posteroanterior radiograph of the pelvis.

Treatment of Scheuermann's disease is indicated to relieve pain,

to correct an unacceptable cosmetic deformity, and to prevent potential progression or worsening of the curve. Treatment will vary depending on the size of the curve, the flexibility of the curve, the patient's age and the patient's preferences. For patients with more than one year of growth left, the kyphosis can be partially reversed by wearing a brace (eg, a Milwaukee brace) for one to two years. It can improve the curve during the growing years by restoring height to the front of the vertebral body and sometimes can reduce pain. For patients who are already skeletally mature, bracing is not an effective treatment. An exercise program, including specific strengthening and hamstring stretching exercises, may be recommended in conjunction with bracing. While exercise won't correct the deformity, it can be helpful in alleviating back pain and fatigue. Surgery is rarely needed for Scheuermann's disease. It may be considered for patients with severe deformities, if neurological deficits are present, and occasionally if pain is present with the deformity. The goal of the surgery is mostly to reduce the deformity, although some feel it can lessen pain if present.

Sources of support : None
Conflicts of Interest : None

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