

Original Research Article


Evaluation of low backache in young adults with MRI

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Abstract

Background: Law back helps maintaining structural support and provide movements. Pain in low back can be result of condition affecting bony lumber sine, disc between vertebrae, ligament, spinal cord, nerves and muscle.

Materials and methods: Patient coming to radiology department with chief complaint of low back pain were included. Consent was taken from each patient who came with low back pain. PHILIPS ACHIEVA1.5 Tesla used.

Results: Out of 40 patient studied 20 were males and 20 were females. The age range was from 23-40 years. Degenerative changes at L4-L5 level was most common cause of low back pain.

Conclusion: MRI is the modality of choice for diagnosing condition causing low back pain.

Key words

MRI, Low backache pain, Young adult.

Introduction

Low backache is the most common reason for visiting physician. Low back pain is defined as pain and discomfort localized below the costal margin and above inferior gluteal with or without leg pain. Low back pain is divided in to three subtypes: acute, sub acute and chronic low back pain. Acute low back pain is pain occurring for 6

week. Sub acute low back pain is pain occurring between 6-12 week. Chronic low back pain is pain occurring for more than three months. Common causes for low back pain are

- Degenerative disc disease
- Herniated disc disease
- Osteoarthritis
- Spondylitis and spondylolysthesis

- Spinal canal stenosis
- Scoliosis and kyphosis [1-3].

Materials and methods

Aim of present study was to study the MRI finding of conditions causing low back pain in young people.

Source of data

Patient coming to radiology department with chief complaint of low back pain.

Inclusion criteria

Young patient with chief complaint of non-traumatic low back pain.

Exclusion criteria

Low back pain cause by trauma.

Method of collection of data

Consent was taken from each patient who came with low back pain. PHILIPS ACHIEVA1.5 Tesla used.

Technique

Fast Spin Echo (FSE), T1weighted, T2 weighted, Short Time Inversion Recovery (STIR)

Planes

Coronal, Axial, Sagittal views were taken.

Results

Our study was a prospective study of 40 young patients with low back pain over period of 24 months came to department of Radio diagnosis.

MRI was done to evaluate the causes of low back pain. Out of 40 patient studied, 20 were males and 20 were females. Average age range was from 23-40 years.

Low backache pain was the most common cause due to which people visit to radiology department. Degenerative disc disease was the most common cause of low back pain in young patient. Conditions like Disc protrusion, nerve root displacement and compression, disc

degeneration, Disc herniation and high signal intensity signals are easily detectable through MRI machine.

Degenerative changes were assessed by MRI as loss of signal intensity on T2W images with reduced disc height.

Disc bulge represent as displacement of outer fibres of annulus fibrous beyond the margin of adjacent vertebral bodies involving more than one quarter of circumference of an intervertebral disc.

L4-L5 was the commonest disc involved which is followed by L5-S1. Lumbar canal stenosis occur due to narrowing of spinal canal and was commonly seen at L4-L5 level.

The sequestered disc is a condition in which portion of vertebral disc fragments migrates in to spinal canal which on MRI appears as hypointense on both T1 and T2.

Sacroilitis define as inflammation of one or both of your sacroiliac joint and was most commonly seen in females.

Schmorl's nodes define as an upward and downward protrusion of a spinal disk soft tissue in to bony tissue of the adjacent vertebrae and were easily detected by MRI.

Spinal stenosis is also caused by ligamentum flavum hypertrophy and facet joint arthropathy. Hemangioma are easily detected with the help of MRI machine.

Discussion

Lumbar disc degeneration changes are the most common cause of low back pain around the world and the majority of cases are due to disc herniation.

In our study, male patient are more affected with low back pain than female patient. Low back pain affect more male because of mechanical injury and stress [4-6].

Conclusion

MRI is the best imaging modality for diagnosing conditions causing low back pain in young people.

The commonest cause of low back ache is degenerative disc disease, most common level being involved is L4-L5.

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