



NEUROLOGICAL EVALUATION OF PATIENTS WITH LOW BACK PAIN PRESENTING IN ORTHO SPINE OPD

Orthopaedics

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ABSTRACT

Low back pain (LBP) is a significant health issue and most frequently treated in healthcare sector. The most commonly recommended approach to manage low back pain in primary health care is called "diagnostic triage. Those patients in which such "red flags" are identified are referred to surgery or to the appropriate diagnostic procedures. The present research was undertaken to assess neurological Status of patients with low back pain in a out patient department. A total of 200 patients with low back pain reported in spine OPD in the Department of Orthopaedics, Netaji Subhash Chandra Bose medical college Jabalpur (India). Among these, LBP was found to be present in 200 patients. Hence; overall prevalence of LBP was 40 percent. degenerative disc disease and lumbar herniated disc are common presentation. Comorbidity associated with back pain are hypertension, diabetes, tuberculosis. For patients who are not improving with initial conservative care after 2 to 4 weeks, referral for physical treatments is appropriate. Surgical evaluation is usually reserved for patients with progressive neurologic findings or radicular pain that has not improved with conservative care.

KEYWORDS

low back pain, red flag sign, neurological examination

INTRODUCTION-

Low back pain (LBP) is a significant health issue and most frequently treated in healthcare sector. Low back pain (LBP) is a chronic remitting pain without neurological deficits,(1) which can affect people of all ages without gender differences. Non-specific or common low back pain is defined as pain between the costal margins and the inferior gluteal folds, usually accompanied by painful limitation of movement, often influenced by physical activities and posture, and which may be associated with referred pain in the leg.

Diagnosing common low back pain implies that the pain is not related to conditions such as fractures, spondylitis, direct trauma, or neoplastic, infectious, vascular, meta-bolic, or endocrine-related process(2) . The most commonly recommended approach to manage low back pain in primary health care is called "diagnostic triage" (3).

Those patients in which such "red flags" are identified are referred to surgery or to the appropriate diagnostic procedures. Those with no "red flags" are diagnosed as having "common" (or "nonspecific") low back pain, treated directly with no further examinations, and reassessed after 2 to 6 weeks(4).

MATERIAL AND METHODS-

The present research was undertaken to assess neurological Status of patients with low back pain in a out patient department. A total of 200 patients with low back pain reported in spine OPD in the Department of Orthopaedics, Netaji Subhash Chandra Bose medical college Jabalpur (India) were enrolled. Complete demographic data of all the patients was obtained.

Thorough clinical and medical history of all the patients was assessed. Chief complaint was recorded, neurological and radiographic examination of all the patients was done. Diagnosis of low back pain was established.

Exclusion Criteria –

1. Patients with history of spinal injury.
2. Patients with history of neck pain and upper limb weakness in neurological examination.
3. Patients with osteomalacic myopathy, thyrotoxic myopathy in which proximal muscle weakness with exaggerated tendon reflexes occur.
4. Patients with history of stroke.

Examination:

The complete neurological examination of Patients should be assessed to identify any red flag signs, gait assessment. For back pain associated with buttock or groin symptoms, the hip should be assessed for pain and range of motion. For patients with leg symptoms, straight leg raise (SLR) test is a screening test for nerve root irritation because it is sensitive though not specific. A positive response reproduces radiating leg pain when the limb is raised to less than 60 degree (5). Raising a leg and eliciting symptoms of buttock or leg pain on the contralateral side (crossed straight leg raise test) is very specific for nerve root irritation. Motor weakness or diminished deep tendon reflexes, especially when asymmetric, can help in identifying the involved nerve root.

Routine plain lumbosacral spine radiographs are appropriate when risk factors for vertebral fracture are present or if the patient is not improving after a course of conservative treatment. Initial radiographs should include 2 views only, anteroposterior and lateral (6).

RESULT-

A total of 500 patients were analysed in spine OPD in the Department of Orthopaedics, Netaji Subhash Chandra Bose medical college Jabalpur (India) . Among these, LBP was found to be present in 200 patients. Hence; overall prevalence of LBP was 40 percent. Among these 200 patients, 29 percent of the patients belonged to the age group of more than 50 years while 55.5 percent of the patients belonged to the age group of 30 to 50 years. 15.5 percent of the patients belonged to the age group of less than 30 years. 44 percentage of patients were male and remaining 56 percentage were female. LBP was found to be present in 200 patients. L1-L2 and compression fracture were seen in 8.5 percent and 6 percent of the patients. Comorbidity associated with back pain having history of hypertension, diabetes, tuberculosis were present in 8 percent of the patients, 5 percent of patients and 3 percent of patients respectively.

Serial No.	Diagnosis	Number
1	Degenerative disc disease	98
2	Canal stenosis	11
3	Spondyloarthropathy	16
4	Lumber Herniated disc	26
5	fracture	12
6	Sacralization of L5	20
7	listhesis	17
serial no.	Age	Number
1	<30	31

2	31-50	111
3	>50	58
Serial no.	comorbidity	number
1	Hypertension	8
2	Diabetes	5
3	Tuberculosis	3

DISCUSSION-

It is hypothesized by various researchers that approximately every human being feels LBP during some point of their life time. Although, usually considered harmless, it is associated with significant proportion of morbidity and significantly affects the quality of life. LBP involves the lumbar region of the spine. The pain occasionally spreads down to one or both legs. Effective therapy of LBP is predicated on accurate diagnosis.

The goal of the diagnostic evaluation is to identify “red flag” conditions including tumors, infections, fractures, and significant nerve root compression. Clinicians must understand that even with extensive investigation, a definitive diagnosis can only be reached in about 15% of patients with LBP(7-10). Hence; the present study was undertaken for assessing the prevalence and neurological status of patients with low back pain in a known population.

In the present study, a total of 500 patients were analysed. Among these 500 patients, LBP was found to be present in 200 patients. Hence; overall prevalence of LBP was 40 percent. Among these 200 patients, 29 percent of the patients belonged to the age group of more than 50 years while 55.5 percent of the patients belonged to the age group of 30 to 50 years. 15.5 percent of the patients belonged to the age group of less than 30 years. 44 percent of the patients were males while the remaining 56 percent of the patients were females. Ganesan S et al, in a previous study, evaluated the prevalence and various risk factors for low back pain (LBP) in young adults in India. They evaluated one thousand three hundred and fifty-five patients and observed that majority of them belonged to the third decade of life. Their results highlighted that marital status, previous history of spine problems, strenuous exercise, job satisfaction, monotony, stress, daily number of studying hours, and family history of spine problems were the associated risk factors of LBP(11).

A review of 56 studies from Walker(12) has also indicated that the point prevalence of LBP was between 12.0 and 33.0%.

In the present study, lumbar herniated disc was present in 13 percent of the patients while degenerative disc disease was present in 49 percent of the patients. Spinal stenosis and spondyloarthritis were seen in 5.5 percent and 8percent of the patients respectively.

listhesis and compression fracture were seen in 8.5 percent and 6 percent of the patients. Atkinson et al postulated that stress can precipitate LBP and can cause chronic LBP. Stress had a statistically significant correlation with LBP. Previous research revealed LBP recurrence, which can eventually become chronic(13,14).

CONCLUSION –

Low back pain is a significant health issue affecting major proportion of world's population. Degenerative disc disease, Spinal stenosis and Osteoarthritis are the major factor responsible for its occurrence. The diagnosis of LBP is complex and multifactorial. Clinical history and neurological examination are essential for differential diagnosis, because they allow the identification of the specific pathology.

Management of LBP can involve many specialists – neurosurgeon, orthopaedist physiotherapist – everyone with different knowledge and experience, which all play an equally important role. For patients who are not improving with initial conservative care after 2 to 4 weeks, referral for physical treatments is appropriate.

Surgical evaluation is usually reserved for patients with progressive neurologic findings or radicular pain that has not improved with conservative care.

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