

Prevalence of Lateral Recess Syndrome among Patients Referred for Radiological Evaluation of Chronic Backache and Sciatica in Samarra Public Hospital

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Abstract: A prospective study performed on 50 patients referred for radiological assessment in Samarra general hospital complaining of chronic backache and sciatica. The study performed for patients referred by senior neurosurgeons, orthopedicians, & rheumatologist, to the radiological unit in Samarra public hospital from October 2016 to October 2017. Radiological studies were interpreted by senior radiologists of Samarra public hospital in cooperation with the referring senior doctors. Patients who are operated on were all confirmed to have chronic Lateral Recess Syndrome both radiological and surgically.

INTRODUCTION

The lateral recess a triangular space formed by the posterior aspect of the vertebral body, the pedicle, and the superior articular facet (1).

There are two types of lateral recess syndrome; the inherent or non-inherent trefoil canal, the nerve root lies in lateral position and becomes compressed in an anteroposterior fashion among the lateral recess notch (2-4). The patients presented usually with chronic backache with sciatic radiculopathy. It is therefore should be differentiated from prolapsed intervertebral disc disease and other degenerative spine disorders (5). The aim of the study is to determine the prevalence of lateral recess syndrome as compared to other causes of chronic back pain.

Patients and Methods

A cross sectional prospective study was done from October 2016 to October 2017 on fifty patients repining of chronic back pain with radiculopathy were analyzed using MRI & MR xylography being performed every three months for every subjective patient, selecting three months was thought adequate to eliminate any vital changes in degenerative disease between every consequent assessment. Reports of all studies were reviewed every alone and compared with the previous study & next study. In our study the age group was between 38 years to 60 years old.

In our study, MRI in thirty two cases out of fifty underestimates root compression where ever because it was surgically confirmed. MR Xylography conjointly underestimates eight cases out of fifty, & was also confirmed surgically. Therefore, we have a tendency to over that neither MRI nor MR xylography could really & absolutely confirm the diagnosis of Lateral Recess Syndrome, where as in alternative studies it has been lots seen about CT Xylography. Although, MRI remains superior in diagnosis of lumbar degenerative disease.

The MRI features of lumbar degenerative disease are delineated, however less is thought concerning the accuracy of MRI in the detection of root compression that results from degenerative changes [7]. Clinically, lateral recess syndrome is classified into two types:

1. Congenital Stenosis [Narrowed Lumbar Channel]
2. Secondary (Acquired) Stenosis [Shrink Lumber Canal]

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Lumbar laminectomy and for aminotomy was performed to the 7 patients in kind of a pair of levels surgery for all patients & all were below expected ages [40s] .

Results

Ten patients of our 50 patients were founded to have Lateral recess syndrome and were evaluated & graded, however, solely 7 patients were operated owing to the refusing of surgery the opposite 3 patients, &symptomatic relief was recorded within the operated patients. Lateral recess syndrome may be a frequent finding being up to 20 % (10 of 50) in our study. In our study it was founded that it is more in people 40-50 years.

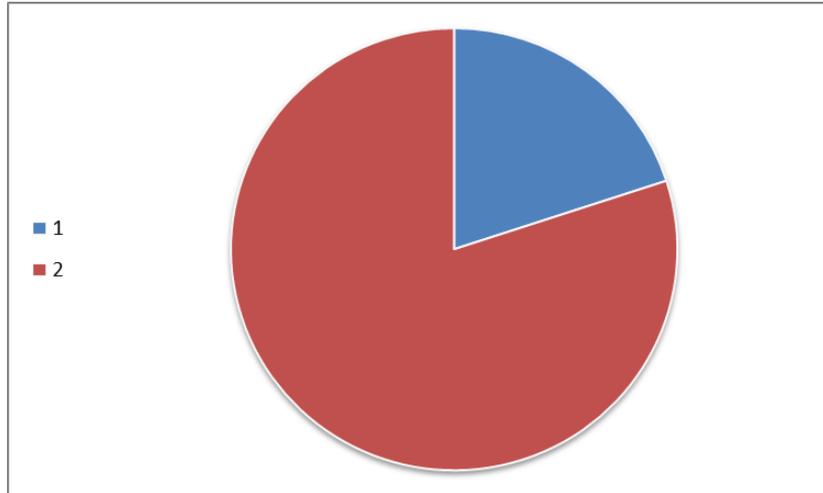


Fig. 1: Percentage of LRS in studied patients

It is more in male patients than female patients within the same age group, &in all study subjects.

Male patients	Female patients
30 patients	20 patients

Rural & formerly rural have more percentage than urban.

Rurals & formerly rural	Urban
35 patients	15 patients

In our study, lateral recess syndrome is less than prolapsed intervertebral disc disease in all patients referred for radiological assessment.

Lateral recess syndrome	Prolapsed intervertebral disc disease	Lumbar sprain spectrum
10 patients	35 patients	5 patients

Five of seven patients who were operated on through bilateral lumbar decompression because of bilateral radiculopathy, the remaining two patients the symptom were unilateral therefore unilateral decompression done for two levels.

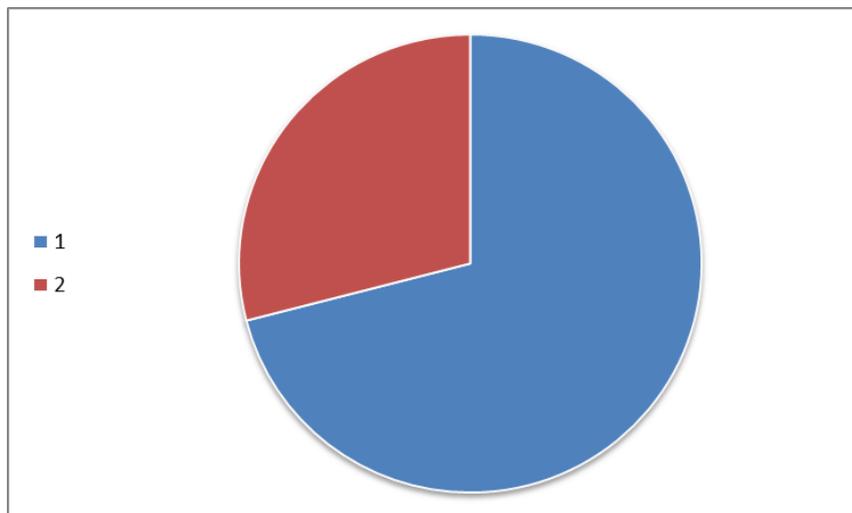


Fig. 2: Percentage of Operated Patients with Bilateral LRS

All operated patients had complete resolution of symptoms both pain & sciatic radiculopathy at time of discharge & 3 months later. The remaining three non-operated patients had partial resolution of symptoms with aggressive physiotherapy, strict rest & adjuvant antiepileptic medication with NSAIDs. It is vital to note that no one of whole number had foot drop nor urinary nor feculent symptoms.

DISCUSSION

In our study, lateral recess syndrome constitutes 20 % , this result is more than that done by Walter S. Bartynski & Luke L. hpublished in AJNR Am J. neuroradiol 24: 348-360 in March 2003 in which it only constitutes only 12%, may be because the latter depends on spinal CT scans & conventional myelography (9).

The age group affected in our study looks to be younger compared to that of Giric etal (10) & Mikhael etal (11) could also be because our age group started heavier work in earlier ages than they do in western countries. In our study, lateral recess syndrome is more bilateral than unilateral & this disagrees with study of Fitnat Dincer etal published by Turkish neurosurgery 2: 30-35 1991 & that is probably because in our study it is more of secondary than being primary type. (12). Also disagrees with the study done by Walter S. Bartynski & Luke L. hpublished in AJNR Am J. neuroradiol 24: 348-360, March 2003 (9).

Postoperative resolution of symptoms is more in our study than in that of Walter S. Bartynski & Luke L. hpublished in AJNR Am J. Neroradiol 24: 348-360 in March 2003, may because we did foraminotomy in addition to de compressive laminectomy (9)

Absence of foot drop in our study is similar to that of the study performed by Hawis Abdul-Salam Abdul-Rahman & Gabriel Iacob published in the Romanian Neurosurgery Journal in 2015 & performed in Neurosurgery clinic in Bucharest Romania. This result may be due to earlier performance of L.S.S MRI in both our & their studies (13).

RECOMMENDATION

1. We recommend frequent surgical reporting of patient both pre- & postoperatively & do not completely rely on MRI result in diagnosis & treatment of L.R.S.
2. Plain x-rays, polytomography, myelography CT are recommended as diagnostic procedures, although, myelography is an invasive procedure & should be kept the last choice.
3. Surgical treatment is superior to non surgical treatment for Lateral recess syndrome.
4. Foraminotomy plus decompression laminectomy is superior than decompressive laminectomy alone in treatment of lateral recess syndrom

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