


# Algorithm for the Diagnosis and Treatment of Lumbar Radicular Pain due to Lateral Spinal Pathology

James B. Macon MD
Framingham NeuroSpine
Framingham, Massachusetts

## Introduction

The diagnosis and treatment of lumbar radicular pain due to benign lateral pathology requires a different approach than for the more common medial spinal pathology.

## Methods

A series of 64 consecutive patients with benign lateral pathology causing lumbar radicular pain were evaluated and treated by selective nerve root blocks with steroid and Marcaine and/or lateral paraspinal minimally invasive surgery via a tubular access system.

**Axial MR scan Lateral Disc Herniation L3-4**

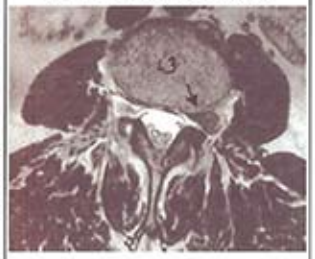



Fig. 1

## Results

The majority of cases (n=51) (Fig.1) with benign lateral nerve root or ganglion compression due to discs or osteophytes (80%) improved with selectve nerve root blocks and did not require surgical treatment.

A treatment algorithm (Fig.3) was followed to assist diagnosis and treatment decisions for lateral spine pathology. When surgery was indicated due to failure of two blocks to control symptoms (n=12) or diagnosis of tumor (n=1) (Fig.2) (20%), the lesion was usually large and/or causing detectable neurological deficit. When surgery was performed, placing a fat graft soaked in steroid and Marcaine reduced postop dysesthesias related to ganglionitis. At surgery the minimally invasive access provided by lateral ports (Fig.4-7) minimized the operative morbidity.

## Conclusions

The treatment algorithm (Fig.3) for the management of lateral spine pathology will avoid unnecessary spine surgery since selective nerve root blocks have been found to control symptoms in the majority of patients (80%) with lumbar radiculitis due to lateral spinal pathology. When surgery is necessary (20%), the minimally invasive tubular access approach greatly reduces patient morbidity compared with more conventional open exposures.

## Learning Objectives

1.Understand the etiologies of lumbar radiculitis due to lateral spine pathology (Fig.1-2). Recognize the benefit to patients of steroid root blocks prior to and during surgical treatment.

2. Review an algorithm for the diagnosis and stepwise treatment of lateral spine pathology utilizing modern diagnostic techniques, selective steroid root blocks and minimally invasive surgery via tubular access systems (Fig.3).

3.Develop familiarity with and understand the benefits of minimally invasive tubular access for lateral spine pathology compared with more conventional open exposures (Fig.4-7).

**Axial MR scan Enhancing L3 Foraminal Tumor**




Fig.2

**Algorithm for Diagnosis and Treatment of Lateral Spine Pathology**

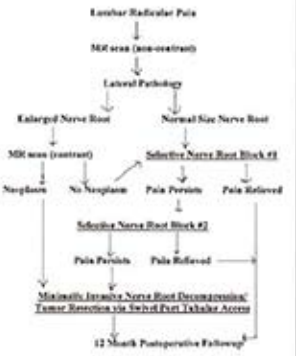



Fig. 3

**Standard 19 Swivel Port**




Fig.4

**Swivel Port placement lateral approach**

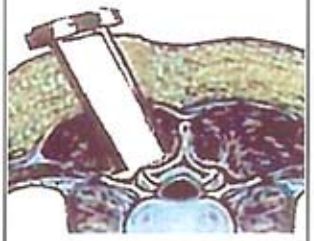


Fig. 5

**Standard 19 Swivel Port Exposure**



Fig. 6

**Standard 19 Swivel Port AP X-ray**

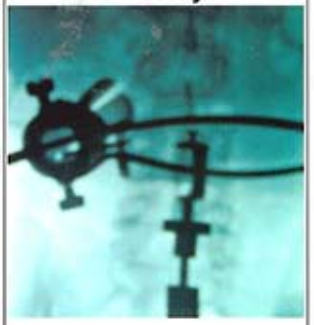


Fig. 7