Axial Loading During Lumbar Spine MR Imaging Can Influence Treatment Decision for Spinal Stenosis

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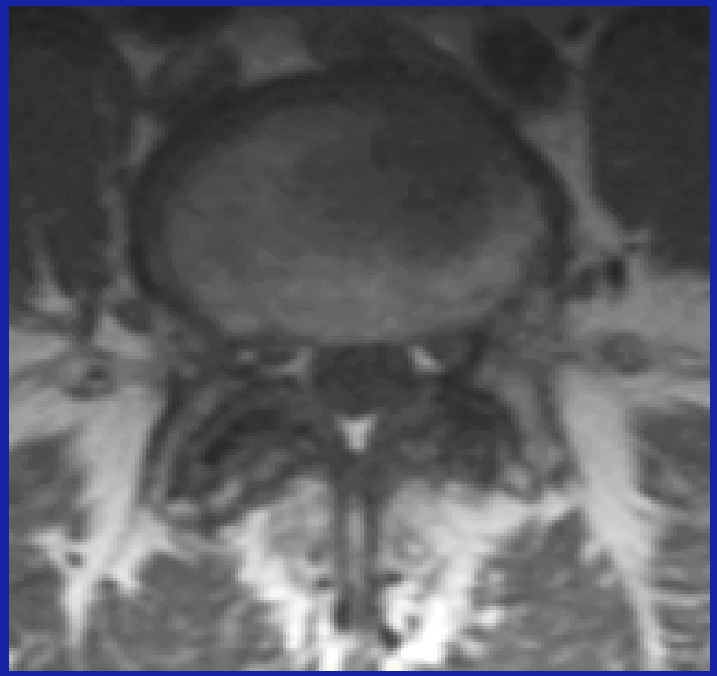
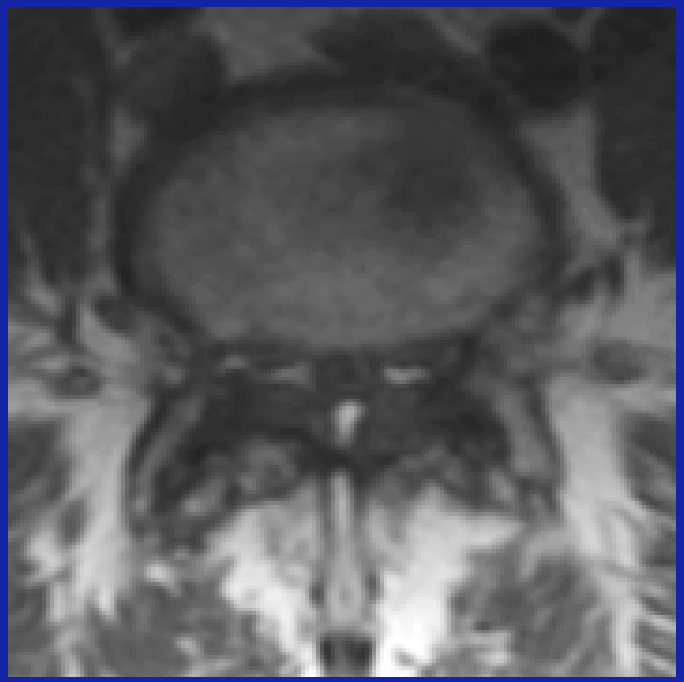
PAIN and NEUROLOGICAL SYMPTOMS are often accentuated when WALKING and STANDING

Patients are often symptom free in supine position

This device simulates the upright patient position

Axial loading during Lumbar Spine MR imaging accentuates spinal stenosis





Neurogenic claudication, sciatica

Purpose

Evaluate if this information influences treatment decision

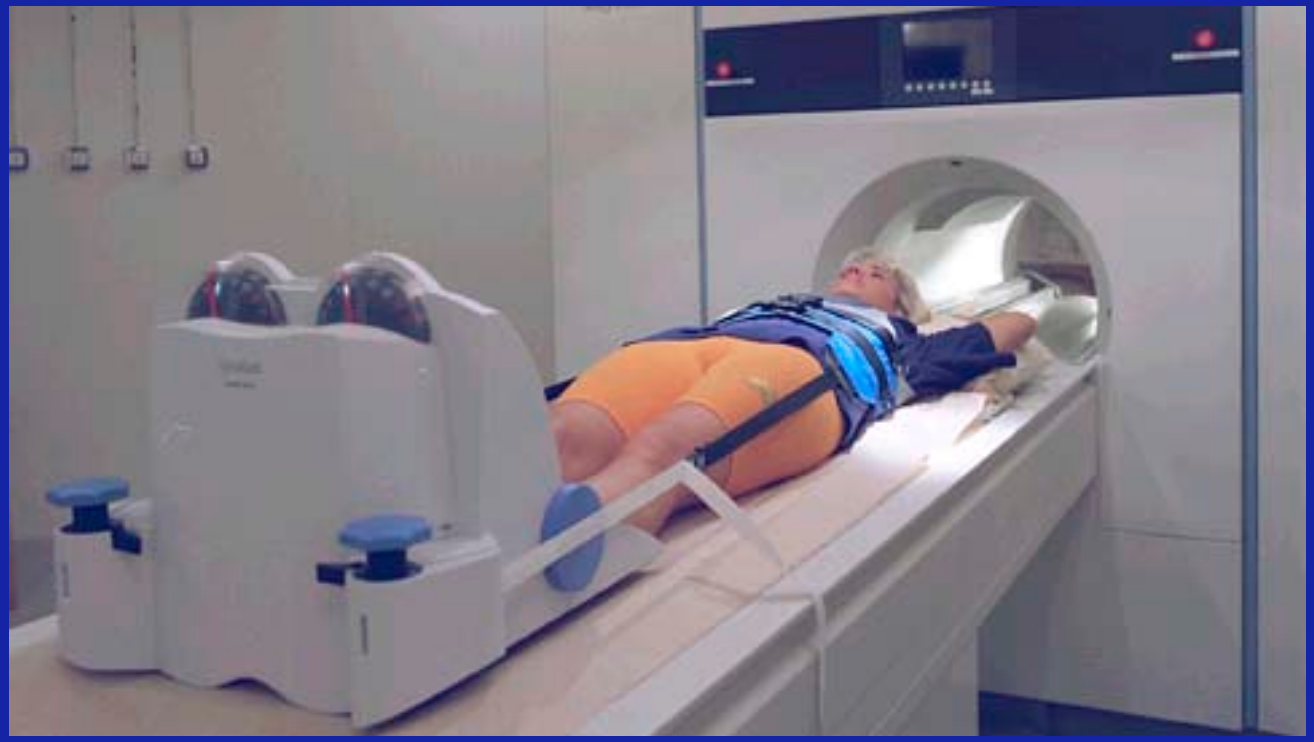
Material and Methods

Patients	**20 (6 female, 14 male)**
Diagnosis	**neurogenic claudication, LBP, and/or sciatica,**
Mean age	**54 yrs (32–75 yrs)**
MR scanner	**1 Tesla Siemens**
Sequences	**Axial T2 without loading**
	Axial T2 with axial loading

MRI OF THE LUMBAR SPINE

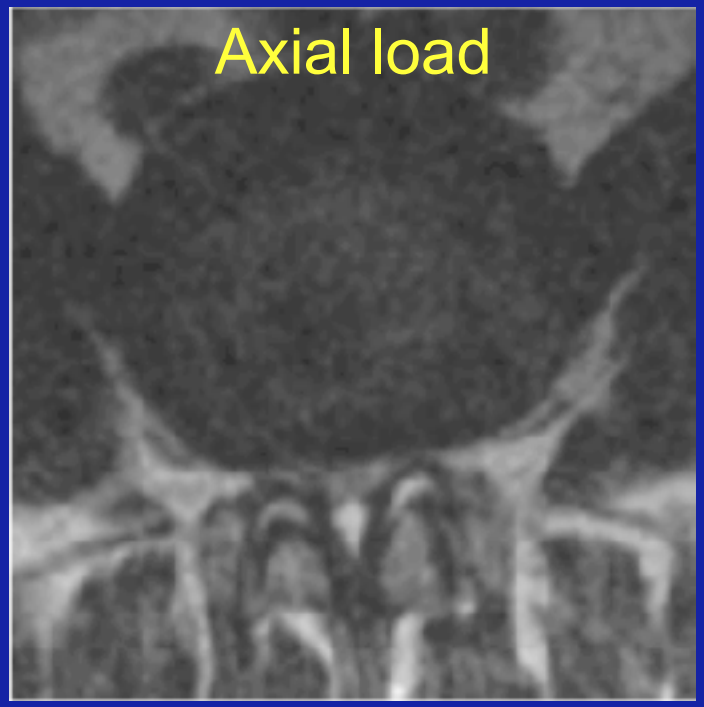
in supine

without and with axial loading

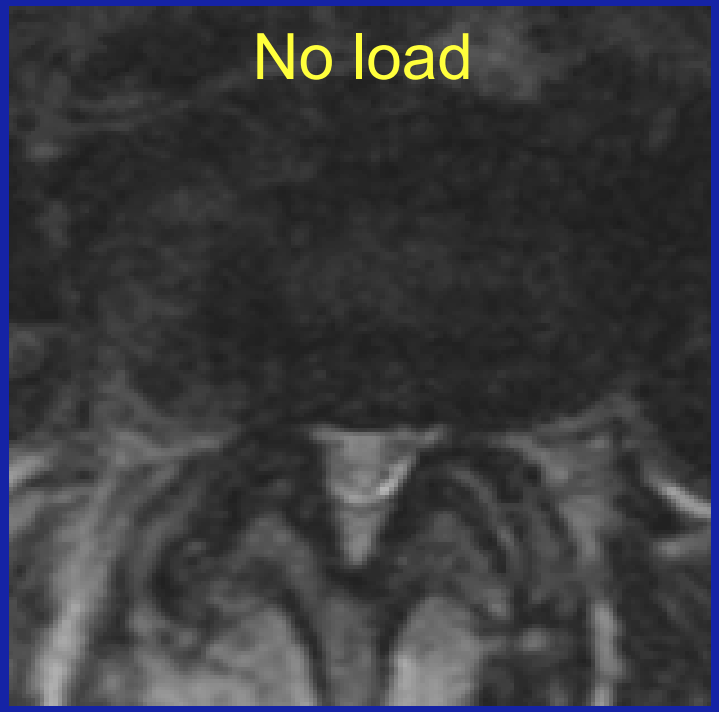


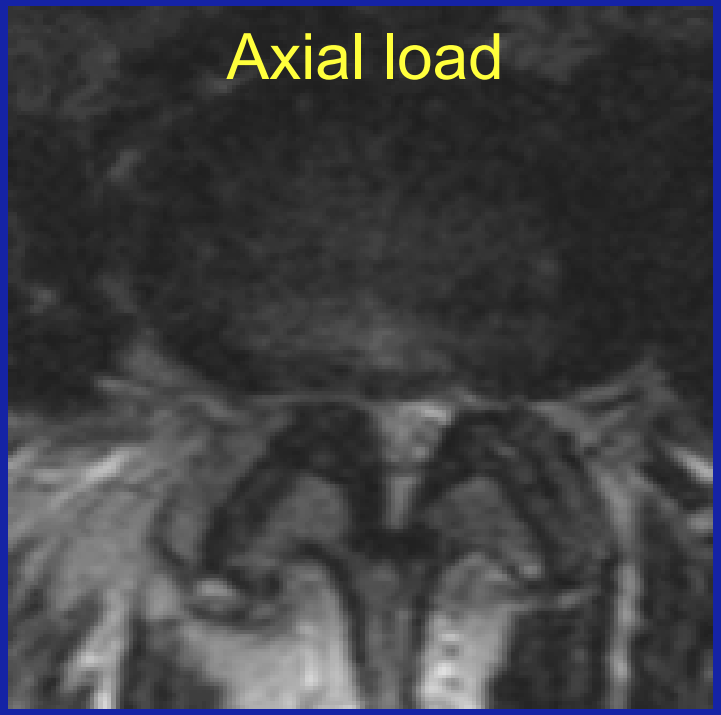
Two neurosurgeons reviewed images with clinical history treatment decision?

Treatment decision was changed due to decrease in dural cross sectional area

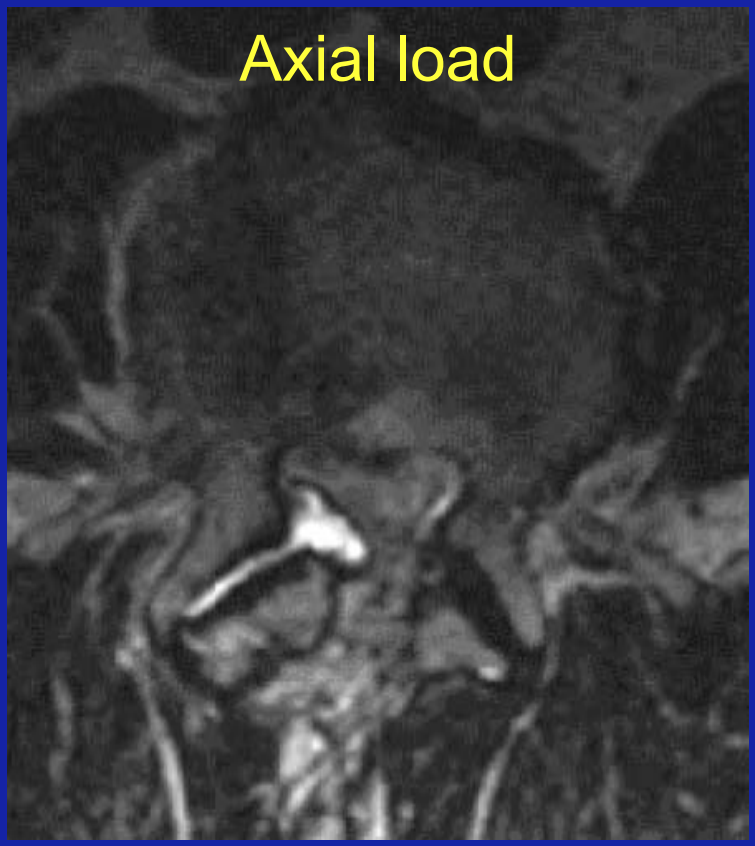


Treatment decision was changed due to worsening lateral recess stenosis





Treatment decision was changed due to increase in size of synovial cyst



Treatment decision changed from conservative to operative

6 /20 patients - 30 %

Axial loading during MRI of the lumbar spine

- increases the sensitivity for spinal stenosis
- influences the treatment decision