

## AN ELDERLY WOMAN WITH INTERMITTENT CLAUDICATION

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### Abstract

This case report illustrates the misdiagnosis of intermittent claudication in an elderly with multiple cardiac risk factors. Careful clinical evaluation and imaging shifts the diagnosis from peripheral vascular disease to spinal stenosis. The decision whether to offer conservative therapy or proceed to spinal surgery requires an accurate assessment of the severity of the symptoms without ignoring the important role of patient preferences.

**Keywords:** Intermittent claudication, misdiagnosis, spinal stenosis

*Wazir NN. An elderly woman with intermittent claudication. Malaysian Family Physician 2006;1(1):23-24*

### CASE HISTORY

A 73 year-old woman presented to her family doctor with intermittent right calf pain for one month of duration, which she described as “aching sensation”. Her pain was brought on by walking and was relieved by rest. She also had numbness in her right big toe. She is a known case of (1) hypertension on hydrochlorothiazide-amiloride and atenolol, (2) hypercholesterolemia on lovastatin, (3) bilateral knee osteoarthritis on glucosamine.

Her doctor made a diagnosis of peripheral vascular disease (PVD) and referred her to a vascular surgeon. In view the finding of good peripheral pulses in the lower limbs, the vascular surgeon made the diagnosis of spinal stenosis and referred her to a spinal surgeon. Subsequent clinical evaluation by a spine surgeon and MRI of the spine confirmed lumbar spinal stenosis secondary to spondylosis (osteoarthritis of lumbar spine). She refused spinal decompression surgery offered to her and opted for conservative treatment. After two years of conservative measures comprising of intermittent non-steroidal anti-inflammatory drugs and modification of her activity of daily living and with intermittent physical therapies at hospital and at home, she is coping well with her day to day life.

### DISCUSSION

#### Degenerative spine disease and spinal stenosis

Spinal stenosis is a narrowing of the vertebral canal leading to compression of spinal nerves or nerve roots, especially in the area of lumbosacral spine. Over the last couple of decades, the life expectancy of our population has increased due to improved health care and better lifestyle. Among the aged, besides large joint degenerative disease, they suffer also from degenerative lumbar spine disease secondary to bony overgrowth and ligament hypertrophy, intervertebral disc herniation, and or vertebral slippage (spondylolisthesis) causing spinal canal narrowing leading to compression of neural structures.

#### Clinical diagnosis

Typical patients are in their late 5<sup>th</sup> or 6<sup>th</sup> decade who complains of dull aches in their lower back with aching, heaviness, tired feeling, numbness and paraesthesia in their thighs and legs. These symptoms are worst with prolonged standing, walking or activity with lumbar spine in extension while the symptoms are relieved typically by sitting, squatting or leaning forward against a wall or over a walking stick to flex the lumbar spine.<sup>1</sup> Keep in view our index patient's other medical problems and risk factors (old age, hypertension, hypercholesterolemia) her calf pain provoked by exertion was initially thought to be due to the vascular claudication from peripheral vascular disease. This is thus important in such patient to bear in mind that claudication can be vascular or neurogenic. Patients in whom leg pain are triggered by prolonged standing or walking that is relieved by stooping forward or resting by sitting or lying down are more likely to be due to neurogenic claudication. An interesting test to differentiate between these two is by riding a stationary exercise bicycle which requires lumbar spine in flexion, eliciting pain in patients with vascular claudication secondary to muscle ischemia but not in those with neurogenic claudication.<sup>2</sup>

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In spinal stenosis the abnormal narrowing of the spinal canal can be produced by various causes, e.g. congenitally short pedicles, progressive bony encroachment from lumbar spondylosis (osteophytes), thickening of ligamentum flavum, protrusion of intervertebral disc, spondylolisthesis, etc. Compression of the microvasculature of the lumbar nerve roots before they exit from the neural foramen is believed to be a major contributing factor in the development of neurogenic claudication.

### Imaging

Imaging with lumbosacral spine radiographs may show degenerative changes like spondylolisthesis, disc degeneration and disc height lost with osteophytes formation. However, MRI is now the imaging modality of choice. It is important to correlate the MRI findings with the clinical findings as on MRI is too sensitive, showing signs with few symptoms, as in the patient above. On MRI she had degenerated disc changes, which appeared black on T2 weighted images with prolapse at most of lumbar vertebral levels, with hypertrophied (thickened) facet joints and ligamentum flavum but she is symptomatic only from changes at L4/5 and L5/S1 as shown in the Figures.

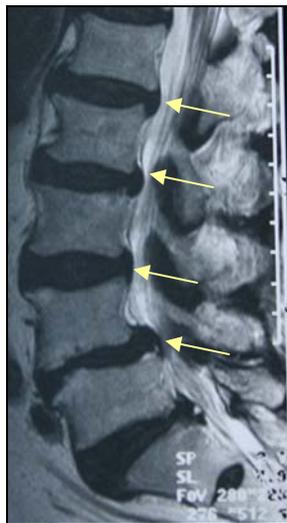
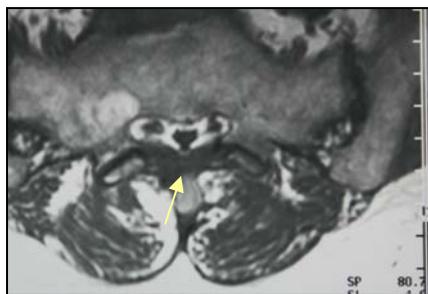


Figure 1 (Right). Sagittal cut of lumbosacral spine T2 image MRI; arrows showing black (degenerated discs at lumbar spine causing stenosis)

Figure 2 (Below). Axial cut L5/S1 T2 image MRI; arrow showing hypertrophied facets and ligamentum flavum causing stenosis.



### Treatment

According to the severity of stenosis, our patient belongs to the mild type and responded well to conservative treatment thus avoiding major spine surgery in a possibly high-risk patient. In the event that her symptoms get worse and affect her activities of daily living then one can explain and suggest to her and her family about lumbar spinal decompression surgery (with or without fusion and instrumentation).<sup>3</sup>

### CONCLUSION

This case illustrates the importance of a good history (especially about aggravating and relieving factors of leg symptoms) and careful physical examination in an elderly patient presenting with back and leg pain. Here I also recommend a trial of conservative treatment, judicious use of non-steroidal anti-inflammatory drugs and physical therapy before embarking on any major spine operation in elderly patients.

### REFERENCES

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