CASE REPORT

An Unexpectedly Progressed Lumbar Herniated Disk

James A. Lipton, DO
2nd Lt Geoffrey A. McLeod, DO, USAF, MC

The authors describe a case of a 26-year-old female military veteran who presented with low back pain that she attributed to a recent foot injury. The patient reported a history of lumbar pain while in the military that had been treated successfully with high-velocity, low-amplitude osteopathic manipulative treatment. The patient's current pain was improved with osteopathic manipulative treatment and gait correction. Several weeks after her initial presentation, the patient reported that she had had a herniated disk diagnosed 2 years earlier by means of magnetic resonance imaging. Updated magnetic resonance imaging was performed, the results of which revealed a large herniated disk that had caused severe stenosis. The patient was immediately referred to a neurosurgeon for consultation and subsequently underwent surgical treatment.

The American Osteopathic Association has established guidelines regarding the use of osteopathic manipulative treatment (OMT) for low back pain after other potential organic causes (eg, vertebral joint rupture, inflammation of intervertebral disks, masses in low back structures) have been ruled out or considered unlikely.1 The use of OMT has been shown to be of value in patients with subacute low back pain.2 For some patients, however, radiologic imaging may be indicated. Physicians must recognize “red flag” indicators for low back pain to determine whether imaging studies are warranted.3

We present the case of a patient with an unexpectedly large and severe herniated disk that was initially masked by a relatively unremarkable history and physical examination.

Report of Case

In February 2012, a 26-year-old athletic female military veteran was referred to our medical center’s physical medicine and rehabilitation service for treatment of recurrent low back pain with radiation to the left foot.

Initial Visit

At her initial visit, the patient reported no numbness, tingling, or burning sensations accompanying her pain. She also reported no loss of bowel or bladder control. The patient recalled having low back pain for years during active military duty (2005-2011) and having a recurrence of pain just before her discharge in 2011. At that time,
Follow-up and Treatment

The patient was followed up weekly by a physician in the physical medicine and rehabilitation department (J.A.L.) for the next 45 days. During this time, she continued using her 6-mm shoe lift. The same soft tissue OMT techniques were used to relieve her ongoing pain; each OMT session reduced the patient’s self-reported pain score from 7 to 0 on a 10-point scale.

In late February 2012, the patient reported that she was now aware that she had had a disk herniation at L4-5 2 years earlier that was diagnosed by means of magnetic resonance (MR) imaging. The findings of her previous MR image yielded no indications for surgical treatment, and the patient stated that her pain had been alleviated.
with chiropractic and osteopathic manipulative treatments. An updated MR image was obtained (Figure 2), the results of which revealed a large central posterior disk protrusion at L4-5, which had obliterated the thecal sac and caused substantial central canal stenosis.

The patient was immediately referred to a neurosurgeon for consultation. The neurosurgeon advised an open bilateral L4-5 diskectomy because of the severe stenosis. In accordance with the patient’s request, the same physician in physical medicine and rehabilitation continued to provide OMT to control the patient’s pain. Additional OMT techniques were limited to lumbar fascial release and sacral distraction in an attempt to ease tissue restriction and decrease intradiscal pressures. The OMT sessions continued to provide pain relief for the patient up until her scheduled surgical procedure in late March 2012.

Comment
In the present case, follow-up MR imaging revealed an unexpectedly large lumbar herniated disk, and the patient was successfully referred for surgical treatment despite her apparently unremarkable presentation.

To help physicians identify patients who should be evaluated further, the American College of Radiology has put forth a list of “red flag” indications for patients with low back pain (Figure 3). Soft tissue imaging is specifically indicated in patients who exhibit radiculopathy or spinal stenosis that may need surgical correction.4,5

Responsibility is on the physician to reevaluate patients with continued symptoms when initial conservative therapies are ineffective or when symptoms are persistent or progressive. Magnetic resonance imaging can be indicated for patients exhibiting lumbosacral radiculopathy, infection, metastases, or cauda equina syndrome.4,5 This imaging modality has been shown to have high specificity and accuracy (approximately 90%) in the evaluation of benign and malignant masses.6 Hegarty et al7 found that findings of MR imaging offer important information regarding the location and size of herniated disks.

The present case illustrates the benefit of obtaining an updated MR image in a patient with low back pain, particularly when a prior herniated disk is suggested. Al-
though the patient’s pain improved with OMT and gait correction, an updated MR image revealed an unexpectedly severe herniated disk for which surgical treatment was indicated.

**Conclusion**

The present case illustrates that severe disk herniation may be present in a patient with a seemingly unremarkable presentation. Physicians should weigh patient history and examination findings carefully in accordance with existing guidelines when considering the need for an updated MR image.

---

**References**


© 2013 American Osteopathic Association