Imaging for Low Back Pain: When Is It Indicated?

By Steven A. King, MD, MS [2]

For most patients who have had low back pain for less than 6 weeks, there is little need for imaging studies.

Under the auspices of the American Board of Internal Medicine Foundation (ABIM), 9 medical specialty societies recently began issuing recommendations for several tests and treatments that are frequently used inappropriately. Among the recommendations is one on the use of imaging tests for low back pain (LBP) that was developed by the American Academy of Family Physicians (AAFP).¹

LBP is one of the most common problems for which patients see primary care physicians. Patients are often concerned that the pain may indicate a serious injury or disease that may rapidly progress. However, most acute LBP improves significantly within a month of onset and requires little treatment apart from OTC NSAIDs or acetaminophen and sometimes heat. Generally, it is far better for people to remain active despite pain rather than to markedly limit their activities, which can lead to further pain from deconditioning.

There is little need for imaging studies for most patients who have had LBP for less than 6 weeks. Such tests are unlikely to provide any additional useful information about the cause of the pain or its treatment or outcome. Apart from the financial waste of unnecessary tests, there is the more serious problem of needless exposure to radiation from such tests as radiography and CT. Finally, the tests may detect abnormalities that physicians might feel need to be surgically corrected. Of course, when it comes to the lumbar spine, most of us have at least one abnormality.

A classic study, the results of which have been replicated many times, demonstrated that when MRIs were performed on the lumbar spines of adults without any back pain, 64% had at least 1 abnormal lumbar disk and 38% had 2 or more abnormal disks.² Thus, while physicians often attribute back pain to identifiable abnormalities, in reality we really have no idea what role—if any—they play in the development of LBP.

LBP does indicate a severe medical problem in a small percentage of patients. The fear of missing such problems is frequently given as a reason why imaging may be overused. However, in reality, when such severe problems are present, there are virtually always other presenting signs and symptoms in addition to the pain.

Red flags
The AAFP guideline lists a number of red flags that indicate the presence of a severe medical problem associated with LBP. These include:

- A history of cancer
- Unexplained weight loss
- Fever
- Recent infection
- Loss of bowel or bladder control
- Abnormal reflexes
- Loss of muscle power or feeling in the legs

These generally are detected on even a relatively cursory medical history and physical examination. The last 3 findings indicate the possible presence of cauda equina syndrome, a medical emergency that must be diagnosed and treated quickly to avoid irreversible neurologic damage.

To this list, I would add 1 additional symptom:

- Back pain that is exacerbated by lying down

For most patients with mechanical LBP, pain is usually relieved when they are supine, and for this reason, many spend much of their time in bed or lying on the sofa. When a patient tells me that the pain is more severe when lying down—especially if this has become so problematic that he or she has to sleep sitting up in a chair—it markedly raises my concern about the possibility of cancer either
from a primary lesion or from a metastasis, especially from breast or prostate cancer. I have often found that weight loss may be overlooked as a cause of LBP unless the weight loss is severe (ie, when a patient appears cachectic or when lab values indicate malnutrition) because our society is so focused on losing weight. Both physician and patient may interpret the weight loss as a positive thing rather than as a possible sign of something serious. It is interesting to note that although many patients find that their appetites are diminished because of pain, they often gain weight because of reduced activity levels and because they may be spending increased time at home, snacking throughout the day. Thus, weight loss is worth noting unless the patient has been making a conscious effort to achieve this.

Although the AAFP guideline applies to LBP of 6 weeks or less, in fact it also applies to chronic LBP to a large extent. It is estimated that in as many as 85% of cases of chronic LBP, there is no clear etiology for the pain. Even a lumbar disk herniation, for which surgical repair was once considered mandatory to prevent irreversible neurologic damage, often does not require this intervention. There is a sad part to the AAFP guideline. We have known about these red flags for years and multiple papers have highlighted that imaging tests are usually not required in their absence. In fact, the American College of Physicians issued its own guideline last year that came to essentially the same conclusions as the AAFP.

Many patients with LBP feel that their physicians are ignoring a potentially serious problem if no imaging tests are performed and that they are receiving less than optimal care. I could not help noticing a letter to The New York Times that was published after the newspaper reported on the issuance of the ABIM Foundation’s recommendations. The writer of the letter stated that he had had LBP (he did not say for how long) and that he had gone to a rehabilitation physician who told him that he routinely ordered MRIs for all his patients with this problem; abnormal lymph nodes were detected on MRI, which led to the diagnosis of a lymphoma. The letter writer felt that if the MRI had not been performed, diagnosis of the illness would have been delayed.

I am certain there are (unfortunately) many physicians who order screening MRIs on all patients with LBP. However, I am skeptical that the letter writer had no symptoms apart from the LBP. I cannot recall any patient I have seen with cancer-related LBP who did not have at least 1 of the red flags noted above.

It is vital that we as physicians inform patients of what we know and, just as importantly, what we do not know about the cause of most cases of LBP. We need to tell our patients that these tests usually do not provide any useful information, that they unnecessarily expose the patient to radiation, and that they generally are an unnecessary expense.

References:

Source URL: http://www.diagnosticimaging.com/blog/imaging-low-back-pain-when-it-indicated

Links: