Muscle Relaxants: Overused, Ineffective for Acute LBP?

by Michael Devitt, senior associate editor

Low back pain is the most common cause of limited or restricted activity in people younger than age 45, and one of the most common reasons for visiting a physician. To treat back pain, doctors often prescribe a range of medications, including nonsteroidal anti-inflammatory drugs (NSAIDs), muscle relaxants and analgesics. Muscle relaxants are the second most common type of drug used to treat low back pain; a 1998 study found that on average, 35 percent of people with LBP are prescribed some type of muscle relaxant.[1]

The use and overall efficacy of muscle relaxants for LBP remain subjects of debate. In 1994, the Agency for Health Care Policy and Research determined that muscle relaxants were no more effective than NSAIDs, and only "probably" more effective than placebo medications, in the treatment of acute low back pain.[2] In addition, because muscle relaxants have sedative properties, they can contribute to other negative side-effects, including drowsiness and increased risk of falls, and can impair one's ability to drive or operate machinery.

In a recent issue of *Spine*, researchers examined the use of muscle relaxants among a cohort population of more than 1,600 individuals who sought a health care provider for relief of low back pain. The study found that while muscle relaxant use was quite common among patients with acute LBP, the drugs did not help patients return to normal functioning more quickly than patients not taking muscle relaxants, and in fact, were associated with an increase in the time it took for patients to recover from pain.[3]

The study population consisted of patients who had suffered from back pain for less than 10 weeks, but had not yet sought care for their pain. Each patient was interviewed and given a physical examination at the initial visit. Patients were contacted 2, 4, 8, 12 and 24 weeks after the baseline interview, or until they felt "completely better," if that was before 12 weeks. All patients were interviewed at 24 weeks, irrespective of their level of recovery.

At each interview, patients were asked if they had returned to the same functional status as before their episode of back pain occurred, and if they felt "completely better." Functional status was determined using a Roland-Morris

"sickness impact" questionnaire designed specifically to assess loss of function due to back problems. In addition, the patients were asked whether they had used any prescription and non-prescription medications for back pain since the previous interview, and whether they had taken muscle relaxants, NSAIDs, acetaminophen or steroids.

Results

Seventy-eight percent of all patients in the study used NSAIDs at some point during the study; 49 percent used muscle relaxants.

Muscle relaxants were used more frequently by patients who initially sought out a medical doctor for back pain relief. Of the patients who visited a physician, 63 percent took a muscle relaxant during their episode of back pain, compared to only 23 percent of patients who saw a doctor of chiropractic as their initial health care provider.

The mean time for patients in the study to return to functional recovery was 16.2 days. However, among patients who used muscle relaxants, average recovery time was twice as long: 32.4 days.

After adjusting for baseline status, the researchers noted that patients who take muscle relaxants "return to self-assessed ability to perform their daily activities more slowly than patients who do not take muscle relaxants." These patients, on average, took 12 percent longer to return to normal than patients not taking muscle relaxants. The researchers believed these results could be related directly to muscle relaxants, or to indirect factors, such as more time spent in bed after an injury, increased likelihood of falls, and/or other variables.

In patients with sickness impact scores equal to or greater than 12, those who took muscle relaxants took 19 percent longer to recover functionally than patients not taking muscle relaxants, even after adjusting for factors such as baseline sickness impact scores, income levels, duration of back pain before the initial visit to a doctor, NSAID use, and the patients' workers' compensation status.

"In patients with severe acute LBP, as evidenced by a Roland score greater than or equal to 12, muscle relaxant use was associated with a statistically significant increase in time to functional recovery," stated the authors. They also noted that patients with worse symptoms at baseline were more likely to receive muscle relaxants. This led them to hypothesize that differences between patient groups may have resulted in patients with worse initial prognoses being prescribed muscle relaxants, and consequently, having worse clinical outcomes.

However, they added that they found "no evidence of benefit" from muscle

relaxants in patients with severe acute low back pain, which indicated that any benefit derived from muscle relaxants would likely be modest at best. Furthermore, in patients with less severe episodes of back pain, there was "no demonstrable effect from muscle relaxant use. This held true even after controlling for Roland score, subjective pain, sciatica, income, duration of episode (greater or less than 2 weeks), NSAID use, and workers' compensation."

"This large cohort study showed no evidence of benefit, and even a delay in functional recovery, for severely affected patients who take muscle relaxants in the setting of acute back pain," the authors concluded. They added that "a better understanding" of the clinical effects of muscle relaxants in low back patients is needed, and that that randomized, community-based trials should be conducted to determine whether muscle relaxants provide any real benefit in addition to standard low back pain care.

References

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