AAPM: Spinal-Stretching Device Relieves Back Pain

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HONOLULU, Jan. 29, 2009 -- Stretching patients' spines gently with a noninvasive, computer-controlled traction device relieved back pain of different etiologies in a small study, a researcher said here.

Six weeks of treatment with the device reduced mean pain scores from 6.4 on a standard 10-point index to 0.8 ($P<0.0001$), reported Charlotte Richmond, Ph.D., of NEMA Research in Miami Beach, at the American Academy of Pain Medicine meeting here.

The device, called the DRX9000, has been cleared by the FDA. It consists of a two-section table to which patients are strapped in a level, supine position.

When the two sections are separated, the spine is gently stretched. Dr. Richmond said at a poster presentation that the process is under precise computer control, distinguishing it from low-tech spinal decompression methods such as hanging patients upside down by their ankles.

The prospective but uncontrolled study enrolled 20 patients with lower back pain from a variety of causes for at least 12 weeks: herniated or degenerated discs, failed back surgery, sciatica, or posterior facet syndrome.

Patients with pain of apparent neuropathic origin were excluded, as were those with a variety of musculoskeletal conditions for whom spinal decompression may be risky.

Previous treatments included chiropractic, various electrical stimulation treatments, icing, heat, massage, exercise and physical therapy, acupuncture, epidural and facet injections, and ultrasound.

During the first week, patients underwent five 28-minute sessions, tapered to two sessions per week as the six-week trial went on.

Ice was applied after each session, and patients performed special exercises starting in week three.

In addition to the significant pain reductions, mean Oswestry disability scores declined steadily from 23.7 at baseline to 5.5 at week six ($P<0.0001$), Dr. Richmond said.

Some cases of neck pain occurred that were "possibly" attributed to the treatment, Dr. Richmond reported. Otherwise, there were no apparent adverse effects from the treatment.

At week six, patients scored the treatment at a mean of 8.1 on a 10-point scale of satisfaction with treatment. Some 89% of patients said they would recommend it to others.

Dr. Richmond said a randomized trial was the next step.

Daniel Wik, M.D., a neurologist at Midwest Pain Clinics in Omaha, said he was skeptical in the absence of physiological data.

"We're seeing clinical outcome studies, but we're not actually seeing the pathophysiology of what changes are actually made. That's the scientific rigor," he said.

Improvement based solely on patients' self-reports "is not good enough," said Dr. Wik, who was not involved in the study.

Still, he said, the idea of nonpharmacologic approaches is attractive. He said he had previously had good success with other traction-based devices, but cost has been a major concern.

He noted that reimbursements for decompression therapies are low, and it's difficult to recover an investment of $100,000 to $150,000, the standard price for new devices such as the DRX9000.

The study was funded by Axiom Worldwide.

One co-author of the study was an employee of Axiom Worldwide.

No other potential conflicts of interest were reported by Drs. Richmond or Wik.

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