

New Study Questions Use of MRIs

ARE THEY RESPONSIBLE FOR INCREASED SURGERY?

Editorial Staff

MRI is commonly used as a diagnostic tool, but experts have questioned whether the findings necessarily relate to patient complaints. A study recently released in the *New England Journal of Medicine*,¹ "Magnetic Resonance Imaging of the Lumbar Spine in People without Back Pain," examines that question.

The study did MRIs on 98 asymptomatic people and discovered a high prevalence of bulges, protrusions, and extrusions:

"With the results of the two readings averaged, 52 percent of people without symptoms had a bulge at at least one intervertebral disk, 27 percent had a protrusion, and one percent had an extrusion. Thus, 64 percent of these people without back pain had an intervertebral disk abnormality, and 38 percent had an abnormality at more than one level."

In an editorial in the same issue of the *New England Journal*, well-known researcher Richard A. Deyo, MD, MPH, made these comments:

"The recent increase in the rates of lumbar-spine surgery (laminectomies, discectomies, and fusions) may be related in part to the availability of new imaging techniques.² Lumbar surgery is most commonly performed after a herniated intervertebral disk has been diagnosed, often by imaging of the spine. Although surgery relieves pain in carefully selected patients with herniated disks, most patients improve without an operation. Studies suggest that imaging studies only weakly predict either the need for surgery or its outcome.³

"We should regard MRI and other advanced procedures for imaging the lumbar spine as tests for preoperative evaluation, which should be reserved for patients who are candidates for surgery on purely clinical grounds. Thus, imaging should be reserved for patients who have signs and symptoms of radiculopathy and who do not have a response to conservative treatment over a period of four to six weeks.

Dr. W.P. Butt, of the department of diagnostic radiology at St. James's University Hospital, recently made these comments in the *British Journal of Rheumatology*:⁴

"There is very little, if any, justification for MRI scanning in patients with mechanical back pain unless surgery is planned. I know that pretty pictures will be obtained and all sorts of pathological appearances found, but abnormalities are so common in normal asymptomatic individuals of the same age and sex that it is not acceptable to infer that an abnormality is, of itself, significant.

"Another unfortunate effect of MRI in mechanical back pain results from our gullibility to 'scientific' evidence. We seem to respect an image produced by a computer much more than we respect a shadow. Surgeons who have long since learned not to treat x-

rays with surgery will still use surgery to treat a scan.

"Recently, the president of the Academic Orthopaedic Association of the United States stated in his presidential address that 95 per cent of spine surgery for back pain was inappropriate.⁵ I do not wish to enter into a discussion whether his figures were precise or not, but only to point out that everyone of the patients inappropriately operated had pre-operative imaging which was misleading."

The chiropractic practitioner would be wise to recognize the shortcomings of advanced imaging as compared to good, old-fashioned, clinical findings. DCs should caution patients against diving head first into back surgery based upon these studies.

Conservative care continues to be reinforced as the first path of treatment before most other forms of treatment. Surgeons and other medical specialists would be well advised to refer their patients for chiropractic care before spine surgery on a herniation that may be coincidental to the patient's problem.

References

1. Jensen MC, Brant-Zawadzki MN, Obuchowski N, Modic MT, Malkasian D, Ross JS. Magnetic resonance imaging of the lumbar spine in people without back pain. *N Engl J Med* 1994;331:69-73.
2. Taylor VM, Deyo RA, Cherkin DC, Kreuter W. Low back pain hospitalization: recent U.S. trends and regional variations. *Spine* 1994;19:1207-12.
3. Enzmann DR. On low back pain, *AJNR Am J Neuroradiol* 1994;15:109-13.
4. Butt WP. Magnetic Resonance Imaging of the Spine. *Br J Rheumatol* 1994;33:793-797.
5. Radin EL. Whither academic orthopaedic integrity? *Othopaedics* 1993;16:267-9.

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