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Volume 1 Issue 3

Clinical Update

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Modic Changes On MRI and Lower Back Pain

As originally reported by Modic, et al in a 1988 article in Radiology (Modic MT, et al. Degenerative disc disease: assessment of changes in vertebral body marrow with MR imaging. Radiology 1988; 166:193-9) there are characteristic changes found in MR imaging of vertebra coinciding with phases of degeneration of the bone and disc.

- Modic type I changes show decreased signal intensity on T1 weighted spin echo images and increased signal intensity on T2 weighted images.
- Modic type II changes show increased signal intensity on T1 weighted spin echo images and isointense or slightly increased signal intensity on T2 images.
- Modic type III represents decreased decreased signal intensity on both T1 and T2 weighted images.

Modic type I findings are associated with disruption and fissuring of the endplates and are

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Diagnosis and Treatment of low back pain. BMJ 2006;332:1430-4

Strong evidence shows that bed rest and specific exercises(strength,flexibility stretching, flexion & extension) are not effective for ALBP. Exercise and intensive multidisciplinary pain Tx programs are effective for CLBP and are supported by strong evidence.

Special Report

What do...

- improvements in patient safety
- improvements in care quality
- improved efficiency of care
- pay for performance
- record access from anywhere
- Regional Health Information Organizations (RHIO)
- National Health Information Network (NHIN)
- ...have in common?

They are all priorities in a national health care initiative, and they will all be facilitated by the adoption of an EHR, electronic health record. At the 17th annual Health Information Management Strategies Society, a leadership survey was conducted, and 87% of those surveyed either had already implemented an EHR or were planning to implement one.

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Office News

UK BEAM(Back, Exercise and Manipulation) United Kingdom back pain exercise and manipulation randomized trial. **BMJ 2004;329(Dec 11):1381**

This is the first study to show convincingly that both spinal manipulation alone and spinal manipulation followed by exercise provide cost effective additions to care in “best care” general practice.



- **Dr William Caddoo** has joined the **IRON MAN** treatment staff for the 2011 Iron Man season. He will be treating local athletes in the office and at Iron Man events/races.
- **Dr Maryellen O'Connor** recently attended a symposium on research that was presented in 2010 related to manual therapy and rehabilitation. Research confirms the effectiveness of Spinal Manipulation for mechanical neck and back pain and stresses the importance of core stabilization training and low-tech functional restoration exercises.
- **Dr. Nathaniel Tiplady** has just completed a 2 part course on fascial manipulation under Antonio Stecco MD. Dr. Stecco has carried out extensive research to provide new histological and anatomical data regarding the fascial system.

We are very pleased to announce the addition of Massage Therapist, **Lisa Pargoli LMT**. In addition to muscular therapy Lisa's background as a personal trainer and yoga instructor makes her a perfect fit in our integrated rehabilitation facility.

PATIENT FIRST is currently seeking another full-time or part-time Physical Therapist. Please forward our information if you know of any PT's looking for employment.

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associated with fibrous vascular changes (probably an inflammatory phase). Type II changes are associated with fatty change in the marrow of the vertebral bone adjacent to the disc. There is no vascularity of Type II changes as determined by lack of gadolinium enhancement. Modic type III changes are probably associated with subchondral sclerosis seen on plain film radiographs.

The evidence suggests that Modic type I changes are associated with symptoms of lower back pain but Modic type II changes are not. Modic type I changes do seem to progress to Modic type II changes within about 14 – 36 months; therefore, type I changes may worsen with concurrent increased pain and then progress to type II changes with resultant decrease in symptoms.

The incidence of Modic changes in the thoracic and cervical spine has been determined but the clinical significance of these changes in the thoracic and cervical spine has not yet been determined.

Question of the Month

Do chiropractors give advice about nutrition?

Simply stated, Yes. Chiropractors do have training in nutrition throughout their 5 academic year program leading to the degree of Doctor of Chiropractic (D.C.). State laws vary as to the extent of recommendations allowed by a chiropractor but all states allow for chiropractors to provide nutritional advice and supplementation.

While some chiropractors provide extensive evaluation and very specific nutritional advice, we more commonly see chiropractors provide general nutritional counseling which everyone would benefit from:

- reduce total fat intake, particularly saturated fats
- avoid all trans fats
- increase intake of healthy fats (omega-3)
- reduce consumption of refined carbohydrates (anything made with white flour, white sugar, white rice)
- use complex carbohydrates whenever possible
- eat brightly colored fresh fruits and vegetables as often as possible
- increase protein from non-meat sources
- take a good (no additives, no fillers) multivitamin a day

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Overall national data suggest that some 12-15% of medical providers have implemented an EHR.

The greatest challenges facing the EHR environment will be functionality, interoperability and security. A newly developed certification agency, CCHIT (certification commission for healthcare information technology), has recently certified some 33 providers of electronic health records, largely based upon standards relative to these three features.

By most reports, the actual implementation of an EHR "going live" is a slow, tedious process. Many groups, from private practices to large hospital based provider groups, have found that modular implementation probably works best. In this scenario, each feature of an EHR is separately implemented, such as prescription module first, followed by laboratory/imaging modules, followed by patient records, etc. While this methodology is time intensive, gaining 'buy in' from the providers and support staff is more easily administered.

While the trend is toward many of the 500 or more EHR software vendors to merge into fewer and larger companies, interoperability will still be a key challenge to developing RHIOs, in which patient information is readily and easily exchanged within a community. With the advent of online banking, and similar services, the issue of security certainly seems manageable in the future. The implementation of EHRs among complementary services such as the chiropractic profession is progressing at a much slower pace. There are fewer outside forces driving change for complementary providers and fewer incentives to adopt this technology. Nevertheless, we fully expect to see electronic health records slowly implemented among those chiropractors interested in integrated models of care.

Core stability exercise principles.
Current Sports Medicine Report. 2008;7:39-44

A coordinated contraction of all deep and superficial core muscles is needed for optimal spinal stabilization. A major goal of core stabilization is to train functional movements rather than individual muscles. Stability is not only dependent on muscular strength but also on proper sensory input to alert the CNS about interactions between the body and the environment.

Back posture and low back muscle activity in computer workers: a field study.
Clinical Biomechanics. 2009;24:169-7.

Sustained stretch of passive lumbar structures in combination with essentially silent muscles seems to be a large part of the biomechanical risk for LBP in sedentary workers and may exacerbate LBP in sedentary workers.

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Please be aware that Dr Caddoo is available to give a 20 minute lunchtime presentation on how a medical physician can best collaborate with a chiropractor and how our integrative office approaches patient care. Please contact our office and have Ellen schedule Dr Caddoo to come to your office or hospital.

If you would like some additional literature about our office and the services we provide, please contact our office and request that Ellen mail our [Introduction to Patient First Chiropractic and Physical Therapy for Physicians](#) packet to you.

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