

Knee Pain

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Diagnosis of Meniscal Tears – Clinical Exam vs MRI

As you know, MRI is increasingly being used to assist in the diagnosis of musculoskeletal injuries. In the US, imaging has been the fastest growing segment of health costs, having increased by 40% over 10 years. Knee pain is one of the most common reasons for which a person will see their GP. Meniscal tears are thought to be a causative factor in between 9% to 33% of these cases. Arthroscopic meniscectomy is the most common orthopaedic procedure performed in Australia & the US.

There have been recent studies finding that at best, the diagnostic accuracy of MRI is marginally better than physical examination. As I wrote in a recent newsletter, in cases of LBP, MRI can confuse the clinical picture, due to the extremely high incidence of false positive findings. In middle-aged to elderly subjects without knee pain, the incidence of asymptomatic meniscal tears has been found to be as high as 91%.* As with the lumbar spine, an MRI report may create the dilemma of confusing which findings are clinically relevant.

A recent study in the US looked at the cost-effectiveness of MRI for the diagnosis of acute and degenerative meniscal tears. The authors, in a study conducted both in primary care & specialist settings, compared history & physical examination (H&P) alone, to:

- MRI
- MRI used only to confirm a diagnosis of tear based on H&P.
- MRI used to confirm a negative finding on H&P.

Results

For the diagnosis of meniscal tears, H&P was actually found to have a higher specificity than MRI. For degenerative meniscal tears, H&P was significantly more cost-effective than MRI. It was felt H&P was clinically as effective as MRI, making the use of the latter potentially

unnecessary in these cases.

For acute tears, MRI was a cost effective diagnostic option, when used to confirm H&P findings.

The authors made a key recommendation that a greater focus should be placed on teaching and utilizing effective physical examination skills. It was felt that the easy access to imaging, as well as the current practice of defensive medicine, had resulted in the deterioration of physical examination skills. As well as this, in US medical schools a thorough musculoskeletal education was lacking.

The authors proposed that H&P be the sole diagnostic procedure used for degenerative meniscal tears, and MRI used only to confirm positive findings for H&P diagnosed acute tears. They estimated that in the US, for every 1 million patients seen with knee pain, this would result in a cost saving of between \$500 million and \$5 billion annually.

Reference:

Mather, R et al (2015). Cost-effectiveness analysis of the diagnosis of meniscal tears. *American Journal of Sports Medicine*, 43, 1, 128-137.

* See references 4 & 14 in this article.

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