

The Thessaly test

Dear Editor

Dr Scotney (*AFP* January 2010) has provided an excellent summary for the assessment and management of knee injuries.¹ As a medical student, I am pleased to be presented with a useful clinical approach while also having my (mostly) theoretical knowledge reinforced.

I was surprised to see that Dr Scotney made no mention of the Thessaly test in her discussion on meniscal injuries. The Thessaly test, as I understand it, attempts to replicate the torsion and axial loading that produces meniscal tears. The examination is made by supporting the patient in a monopodal weight bearing position with 5 degrees (and subsequently 20 degrees) of knee flexion, and then coaching them to rotate their knee and body. A positive test produces medial or lateral joint line discomfort and a possible sense of locking or catching.² The original research paper showed a much higher sensitivity and specificity than either McMurray's or joint line tenderness examinations for both medial and lateral meniscus injuries. It also showed low rates of false negative and false positive results when the patient is in 20 degrees flexion.² A follow up study³ determined that the Thessaly test was only equivalent to McMurray's but noted clinician experience in performing the examination may have contributed to the different results. More recently, a review paper assessing physical examination of the knee menisci⁴ recommended the Thessaly test as the 'preferred first line test for diagnosis of meniscal tears'.

While the Thessaly test has a smaller evidence base to support its use, it appears at face value to be an easy test to implement and also provides a higher diagnostic accuracy in terms of meniscal tears.

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References

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detection of meniscal tears. *J Bone Joint Surg Am* 2005;87:955–62.

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Reply

Dear Editor

Thank you David for your feedback. The Thessaly test for detection of meniscal tears is a relatively new test, the details of which were first published in 2005.¹ The article, written by the creators of the test, reports a high degree of accuracy for the Thessaly test when performed with 20 degrees knee flexion in detecting both medial and lateral meniscal tears (rate of detection 94% and 96% respectively.) I have seen little of this test being used in the sports medicine setting, perhaps because it is still quite new but also as it requires further evaluation.

Essentially this dynamic, weight bearing test appears to recreate the mechanism of injury. I note that 3.3% of the subjects in group A of the study (seven people) had a clinically significant exacerbation of knee symptoms after performing the test, and one subject developed a locked knee necessitating manipulation under anaesthesia to unlock the knee. I should also point out that in their study, the researchers excluded acutely injured knees (those seen less than 4 weeks after the injury) 'as such knees are very painful and resist the clinical examination and a diagnostic approach based on either magnetic resonance imaging or arthroscopy was thought to be more appropriate'. My article was aimed at managing acute knee injuries from day one, and as such falls outside the parameters of the Thessaly test research study.

The article stimulated quite a lot of discussion among the orthopaedic community. Some felt the description of a 'positive test' to be too vague. The Thessaly test creators considered the test to be positive if the patient experienced 'medial or lateral joint line discomfort and a sense of locking or catching'. Since patients may develop any of the above

symptoms in isolation or combination, it was felt to be unclear where to draw the line between calling a test positive or negative.

There was also concern regarding accuracy of the results as the researchers did not include those patients with other pathologies likely to result in a positive Thessaly test. Note that the study's exclusion criteria were listed as 'early clinical and radiographic signs of osteoarthritis, articular cartilage injuries... all patients with abnormal findings on a conventional radiograph'. When assessing patients of a similar age demographic, we need to consider these differential diagnoses (osteochondritis dissecans, chondral defects, patello femoral joint pain and early onset degenerative arthritis). The research authors have noted their intention to evaluate the effect of chondral and patellofemoral disorders on the diagnostic accuracy of the Thessaly test, and I think this will shed more light on the reliability of this test. It is certainly something to watch!

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Reference

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