

Relative sensitivity and specificity of some provocative tests in the mechanical diagnosis of sacro-iliac joint dysfunction among patients with low back pain

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Purpose: Provocative tests are known to be clinically useful in the identification of soft tissue and articular dysfunctions. However, the proportion of patients with Sacro-Iliac Joint (SIJ) dysfunction who have positive tests (sensitivity) and the proportion that have negative tests (specificity) for these tests are not well known. This study examined the relative sensitivity, specificity and associated stress of Gross SIJ Compression (GSIJC) and Distraction (GSIJD), Supine-Long Sitting (SLS) and Posterior Dimple Compression (PDC) tests among patients with Low Back Pain (LBP).

Method: Fifty three subjects (male-24, female-29; age range 19-90 years, mean age 57.6 years) went through the four tests and the test that elicited pain and/or limb length discrepancy (positive test) were noted. Pain intensity was rated using semantic differential scale before and after testing, while test induce exertion was assessed using borge scale after testing. GSIJC test was set as gold standard for the purpose of analysis.

Result: PDC (0.91) was more sensitive than SLS (0.67) and GSIJD (0.57, while GSIJD was more specific (0.91) than SLS (0.84) and PDC (0.56). However, PDC was the least exerting (7.2) followed by GSIJD (7.5), SLS (13.0) and GSIJC (13.9).

Conclusion: PDC test is the least exerting and more able to identify the proportion of LBP patients having SIJ dysfunction while GSIJD is more able to identify the proportion of patients with LBP without SIJ dysfunction but exert more stress on the patient without gender bias.

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