

Efficacy of Different Clinical Diagnostic Tests and their Psychometric Properties in Diagnosing Piriformis Syndrome

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ABSTRACT

Piriformis Syndrome (PS) is caused by the sciatic nerve compression in the gluteal region causing pain, tingling and numbness in the buttock and the nerve pathway down to lower thigh and into leg. Diagnosing PS is quite difficult and is often misinterpreted. So, there is a need to identify various clinical diagnostic tests and their accuracy. To explore different clinical diagnostic tests, criteria and their psychometric properties for diagnosing PS. Total 516 full-text published articles were identified from PubMed, Scopus and Science Direct from 2012-2024. Only full text prevalence/incidence, review articles and observational studies on individual with PS were included. After duplicate deletion from Mendeley, 225 articles were left to screen at title and abstract level. Finally, 26 full text articles related to research topic were further analysed at full-text level. Out of which only 5 articles were selected and included in the review for analysis. Various clinical diagnostic tools including FAIR, Beatty

test, Hand on Hip sign, SLR, active piriformis and seated Piriformis stretch test are available defined to be reliable and valid measures for the study. The SLR had sensitivity of 0.15, specificity of 0.95, Active piriformis test had sensitivity of 0.78, specificity of 0.80, Seated piriformis stretch test had sensitivity of 0.52, specificity of 0.90, the FAIR test had sensitivity and specificity of .88 and .83, HHS was found to have a sensitivity of 86% and a specificity of 75%. We found two clinical criteria also in which one is utilising clinical symptoms and diagnostic imaging to diagnose PS while another one took into account clinical symptoms, clinical diagnostic tests, aggravating and relieving factors to diagnose PS. The scoping review concludes that various clinical diagnostic tests, like Flexion, Adduction, Internal Rotation (FAIR), Beatty manoeuvre, Straight Leg Raise (SLR), active piriformis test and seated piriformis stretch test are sensitive and specific tools in diagnosing PS.

Keywords: Hand on hip sign, Prevalence, Sciatic nerve compression