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Investigating Clinical Outcomes of Physiotherapeutic Intervention in Shoulder Impingement Syndrome: A Case Series

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ABSTRACT

Shoulder Impingement Syndrome (SIS) is a common cause of pain and dysfunction in the shoulder in the active young adult population who participate in overhead activities, primarily resulting from compression of subacromial structures and rotator cuff pathology. It includes two main pathologies: subacromial impingement and internal impingement. This case series aimed to investigate the effectiveness of physiotherapy interventions, including functional rehabilitation and agility exercises to improve pain, range of motion and functional outcomes in patients with SIS. Five patients (aged 30-45 years old) with SIS were included. For confirmation of the SIS, Neer's impingement test and Hawkins- Kennedy test were applied. Other tests, such as the painful arc syndrome test, drop arm test, and internal rotation strength test was applied for differential diagnosis. The shoulder range of motion by the Goniometer, functional outcome measures by Disability of Arm, Shoulder and Hand (DASH) questionnaire, Shoulder Pain and Disability Index (SPADI), and pain intensity using the Visual Analogue Scale (VAS) before and 6 weeks after the treatment were assessed. Results revealed a significant improvement observed in all outcome measures ($p<0.05$). The pre- and postintervention values (mean±SD) were VAS (6.60±1.140 to 2.00±0.707), SPADI (65.80±7.190 to 17.80±2.280), DASH (61.80±6.017 to 21.40±2.608), fl exion range (87.80±10.25° to 167.00±9.434°), extension range (29.60±3.209° to 52.20±6.058°), external rotation range (24.80±6.380° to 57.60±8.325°), and abduction range (65.00±15.811° to 136.00±19.812°). These results suggest that a structured physiotherapy programme incorporating special test-guided assessment, agility training, and functional exercises are effective in reducing pain, improving shoulder function, and enhancing the Range of Motion (ROM) in individuals with SIS, thereby facilitating a safe return to daily and overhead activities.

Keywords: Agility training, Functional rehabilitation, Special tests, Sports-specific drills

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