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Hip Osteoarthritis

Predictors of Positive Response to Physical Therapy

Osteoarthritis ranks among the greatest causes of disability in adults, proving costly to individuals, healthcare systems, and society.¹ Both exercise therapy and manual therapy have been shown to reduce the associated pain and disability, and they are recommended as first line treatments.²⁻⁶ However, some patients respond better to physical therapy than others, and doctors are often left to make subjective decisions about who will receive a physical therapy referral. Defining the predictors of positive response to physical therapy across a range of disabling, orthopedic conditions has been highlighted as a future research priority.⁷ Answering that call to action, Dr. Alexis Wright and colleagues recently completed a study identifying five predictors of positive response to physical therapy in hip osteoarthritis.⁸

Researchers recruited 91 patients from general practitioners' offices and from an orthopedic center where patients had been referred for surgery assessment and consultation. Patients were randomized into usual care from general practitioners and other healthcare providers and three physical therapy arms (manual therapy, exercise therapy, and combined therapy). Patients received nine, one-hour therapy sessions. Treatment success was defined as a three point or greater improvement on an 11-point pain rating scale after one year.

In general, patients in the usual care arm only achieved important improvements in pain 2% of the time. Patients in the physical therapy arm achieved important improvements in pain after one year in 32% of cases. Considering that nine sessions of physical therapy costs relatively little, this outcome alone might justify referring all patients with hip osteoarthritis to physical therapy at least once. However, Dr. Wright and colleagues were able to use statistical models to differentiate which patients were more or less likely to achieve important improvements in pain.

5 Predictors of Physical Therapy Success in Hip Osteoarthritis

Wright et al. identified five statistically validated predictors. The presence of just one of these predictors suggests an average response to physical therapy. The presence of two predictors doubles the likelihood of positive response. The presence of three predictors suggests a 99% likelihood of therapy success.

- Unilateral hip pain
- Age less than or equal to 58
- Pain of 6 or greater on a 10-point scale
- 40-m self-paced walk test time of 25.9 seconds or less
- Duration of symptoms less than one year



The authors characterize their findings as preliminary and call for others to repeat and validate their study. These predictors did not hold true for usual care, suggesting strongly that these predictors are specific to response to physical therapy - rather than predictors of general improvement.

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