Case Report

Dry Needling Combined With Physical Therapy in Patients With Chronic Postsurgical Pain Following Total Knee Arthroplasty: A Case Series

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Study Design

Case series.

Background

This case series describes a combined program of dry needling and therapeutic exercise in a small group of patients with persistent pain following total knee arthroplasty (TKA).

Case Description

Fourteen patients who underwent TKA had persistent postsurgical pain and myofascial trigger points that were nonresponsive to treatment with conventional physical therapy and/or medication. The patients received a weekly dry needling treatment in combination with therapeutic exercises for 4 weeks. Pain perception was assessed preintervention and postintervention with a visual analog scale and function was assessed with the Western Ontario and McMaster Universities Osteoarthritis Index, 6-minute walk test, timed up-and-go test, 30-second chair-stand test, and knee joint range of motion.

Outcomes

After TKA, the patients had a mean ± SD symptom duration of 6.3 ± 3.1 months. Subsequent to dry needling, patients reported a significant mean ± SD decrease in pain intensity from 55.6 ± 6.6 to 19.3 ± 5.6 (P<.001) and improvements in Western Ontario and McMaster Universities

Osteoarthritis Index scores from 10.1 ± 0.8 to 4.9 ± 1.0 for pain (P<.001), from 5.3 ± 0.4 to 2.4 ± 1.2 for stiffness (P<.001), and from 36.7 ± 2.0 to 20.1 ± 3.2 for function (P<.001). Knee flexion increased from a mean ± SD of 82.7° ± 5.2° to 93.3° ± 4.3° (P<.001), and joint extension improved from 15.8° ± 2.9° to 5.3° ± 2.4° (P<.05). The 6-minute walk test also showed improvement in postintervention values from a mean ± SD of 391.4 ± 23.7 to 424.7 ± 28.4 m (P<.05).

Discussion

After dry needling combined with therapeutic exercises, patients who had chronic pain following TKA showed clinically significant improvements in pain, range of motion, function, and myofascial trigger points. Future randomized clinical trials should further investigate the effectiveness of this protocol under similar conditions.

Level of Evidence

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