**Article Full Title**

Treatment of the Sacroiliac joint in Patients with Leg Pain: a randomized-controlled trial

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**Paper Abstract**

Abstract Purpose: The sacroiliac joint (SIJ) may be a cause of sciatica. The aim of this study was to assess which treatment is successful for SIJ-related back and leg pain. Methods: Using a single-blinded randomized trial, we assessed the short-term therapeutic efficacy of physiotherapy, manual therapy, and intra-articular injection with local corticosteroids in the SIJ in 51 patients with SIJ-related leg pain. The effect of the treatment was evaluated after 6 and 12 weeks. Results: Of the 51 patients, 25 (56 %) were successfully treated. Physiotherapy was successful in 3 out of 15 patients (20 %), manual therapy in 13 of the 18 (72 %), and intra-articular injection in 9 of 18 (50 %) patients (p = 0.01). Manual therapy had a significantly better success rate than physiotherapy (p = 0.003). Conclusion: In this small single-blinded prospective study, manual therapy appeared to be the choice of treatment for patients with SIJ-related leg pain. A second choice of treatment to be considered is an intra-articular injection.

**NIH Risk of Bias Tool**

Quality Assessment of Controlled Intervention Studies

1. **Was the study described as randomized, a randomized trial, a randomized clinical trial, or an RCT**

Yes

1. **Was the method of randomization adequate (i.e., use of randomly generated assignment)?**

Yes

1. **Was the treatment allocation concealed (so that assignments could not be predicted)?**

Yes

1. **Were study participants and providers blinded to treatment group assignment?**

No

1. **Were the people assessing the outcomes blinded to the participants' group assignments?**

No

1. **Were the groups similar at baseline on important characteristics that could affect outcomes (e.g., demographics, risk factors, co-morbid conditions)?**

Yes

1. **Was the overall drop-out rate from the study at endpoint 20% or lower of the number allocated to treatment?**

No

1. **Was the differential drop-out rate (between treatment groups) at endpoint 15 percentage points or lower?**

No

1. **Was there high adherence to the intervention protocols for each treatment group?**

Yes

1. **Were other interventions avoided or similar in the groups (e.g., similar background treatments)?**

Yes

1. **Were outcomes assessed using valid and reliable measures, implemented consistently across all study participants?**

Yes

1. **Did the authors report that the sample size was sufficiently large to be able to detect a difference in the main outcome between groups with at least 80% power?**

N/A

1. **Were outcomes reported or subgroups analyzed prespecified (i.e., identified before analyses were conducted)?**

Yes

1. **Were all randomized participants analyzed in the group to which they were originally assigned, i.e., did they use an intention-to-treat analysis?**

N/A

**Key Finding #1**

Manual therapy was the most successful short-term treatment in reducing SIJ-related leg pain compared to intra-articular injections or physiotherapy.

**Key Finding #2**

Patients in the group just receiving manual therapy were shown to have a significant improvement on social functioning, physical and mental health, and vitality.

**Please provide your summary of the paper**

The article found manual therapy was the most successful short-term treatment in reducing SIJ-related leg pain compared to intra-articular injections or physiotherapy. The results of this study were based on a specific patient population group that was defined by having radiating pain below the buttocks (more than 4 weeks and less than 1 year), pain present in the region of SIJ, and positive provocation sacroiliac pain on three or more tests (present at two consecutive visits). Any causes of sciatica or radiating leg pain identifiable on MRI-imaging (including sacroilitis) were excluded. Patients were randomly assigned into one of three treatment groups and then followed up with at 6- and 12-weeks post treatment. Manual therapy was found to be 72% successful making it the primary choice of treatment followed by the next choice of intra-articular injection with local corticosteroids found to be 50% effective in patients with SIJ-related leg pain and only seeing positive results in 20% of patients in the physiotherapy group.

**Please provide your clinical interpretation of this paper. Include how this study may impact clinical practice and how the results can be implemented.**

The study had very specific inclusion criteria and a very large percent of participants drop out limiting the results of this study from being generalizable to larger populations with SIJ pain. In addition, the study only followed up with patients at a 1.5 and 3-month mark, again limiting the findings of manual therapy on SIJ pain producing short term effects. There also exists a lack of a gold standard for diagnosing SIJ related leg pain resulting in different studies having variable methods for diagnosis and subsequently criteria for inclusion. This makes it challenging for studies to be comparable and uniform in recruitment of samples. The study did ensure its patients in each group did the same exercises and received the same treatment respectfully to standardize results. However, due to such a small sample size and only short term effects being explored more studies are needed to confirm the results and the success of manual therapy for SIJ related leg pain.