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## A randomized controlled trial of intra-articular prolotherapy versus steroid injection for sacroiliac joint pain.

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### Abstract

**OBJECTIVES:** Controversy exists regarding the efficacy of ligament prolotherapy in alleviating sacroiliac joint pain. The inconsistent success rates reported in previous studies may be attributed to variability in patient selection and techniques between studies. It was hypothesized that intra-articular prolotherapy for patients with a positive response to diagnostic block may mitigate the drawbacks of ligament prolotherapy. The purpose of this study was to evaluate the efficacy and long-term effectiveness of intra-articular prolotherapy in relieving sacroiliac joint pain, compared with intra-articular steroid injection.

**DESIGN:** This was a prospective, randomized, controlled trial.

**SETTINGS/LOCATION:** The study was conducted at an outpatient pain medicine clinic at Chonnam National University Hospital in Gwang-ju, Korea.

**SUBJECTS:** The study included patients with sacroiliac joint pain, confirmed by  $\geq 50\%$  improvement in response to local anesthetic block, lasting 3 months or longer, and who failed medical treatment.

**INTERVENTIONS:** The treatment involved intra-articular dextrose water prolotherapy or triamcinolone acetonide injection using fluoroscopic guidance, with a biweekly schedule and maximum of three injections.

**OUTCOME MEASURES:** Pain and disability scores were assessed at baseline, 2 weeks, and monthly after completion of treatment.

**RESULTS:** The numbers of recruited patients were 23 and 25 for the prolotherapy and steroid groups, respectively. The pain and disability scores were significantly improved from baseline in both groups at the 2-week follow-up, with no significant difference between them. The cumulative incidence of  $\geq 50\%$  pain relief at 15 months was 58.7% (95% confidence interval [CI] 37.9%-79.5%) in the prolotherapy group and 10.2% (95% CI 6.7%-27.1%) in the steroid group, as determined by Kaplan-Meier analysis; there was a statistically significant difference between the groups (log-rank  $p < 0.005$ ).

**CONCLUSIONS:**

Intra-articular prolotherapy provided significant relief of sacroiliac joint pain, and its effects lasted longer than those of steroid injections. Further studies are needed to confirm the safety of the procedure and to validate an appropriate injection protocol.

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