

Effect of Prolotherapy for Low Back Pain Caused Sacroiliac Joint

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The significance of anatomic diagnosis is very important in low back pain. Although it is still controversial, low back pain caused by sacroiliac joint lesion is thought to be about 30% of all low back pain. However there is no guideline on diagnose and treatment for sacroiliac joint lesion. In this paper, we present diagnosis of low back pain from sacroiliac joint. We also introduce the mechanism and indication of prolotherapy for sacroiliac joint lesion as well as a special emphasis on ultrasonographic guidance.

KEY WORDS: Low back pain; Sacroiliac joint; Prolotherapy; Ultrasonography

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CONTENT OF COMMUNICATION

Sacroiliac joints are essential for effective load transfer between the spine and legs. Movement of sacroiliac joints is limited in the average range of 2 degree in all three planes of this joint¹. However, according to patient's situation, one or both sides of sacroiliac joints have overload or repetitive use. These situation are scoliosis², leg length discrepancy³, aberrant muscle recruitment⁴ etc. Overload and repetitive use bring about joint laxity, hypermobility, and muscle fatigue etc^{4,9}. Then the sacroiliac joints become a pain generator. Although it is still controversial, low back pain causing sacroiliac joint is thought

to be about 30% of total low back pain. Referred pain causing sacroiliac joint is similar to radiating pain of root compression⁵. Cause of low back pain should be distinguished according to corresponding anatomical lesions for better clinical result. Therefore functional examination about sacroiliac joints is essential. But diagnostic value of various maneuvers for sacroiliac joint is controversial. In our practice, we perform anterior gapping, posterior gapping, thigh thrust, Gaenslen test, and Faber test. When two or more of tests are positive, we diagnose sacroiliac lesion^{6,7}. Among lesions of sacroiliac joint, mechanical pain — pain provoked by unique posture or movement — is treated by prolotherapy.

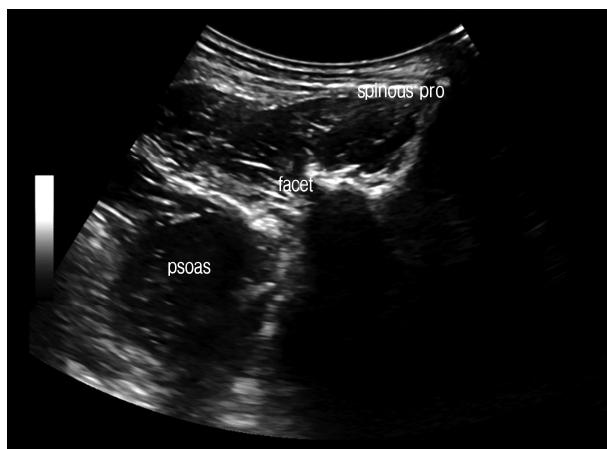


Fig. 1. Facet as target point of prolotherapy on ultrasonography.



Fig. 2. Transverse process as target point of prolotherapy on ultrasonography.

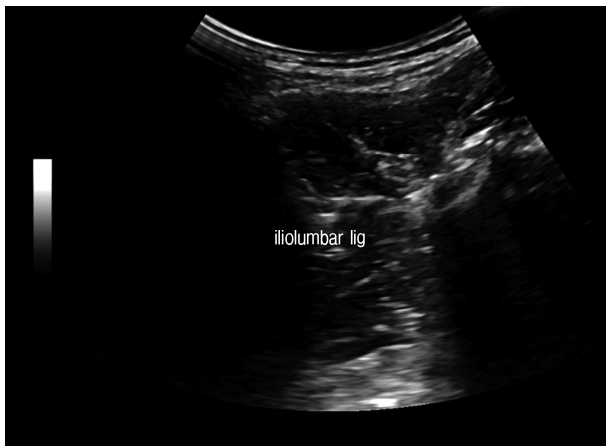


Fig. 3. Iliolumbar ligament as target point of prolotherapy on ultrasonography.

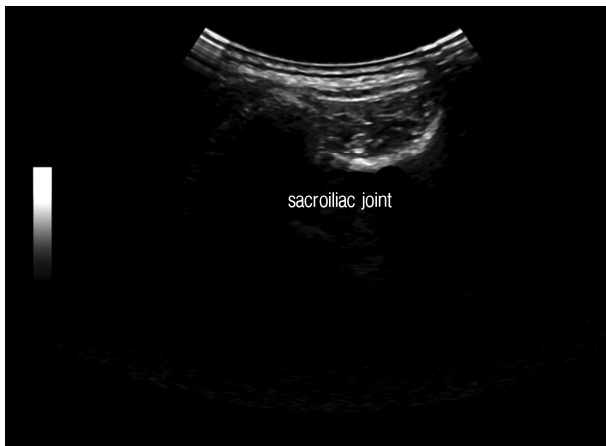


Fig. 4. sacroiliac joint (dorsal SI ligament & interosseous ligament) as target point of prolotherapy on ultrasonography.

Prolotherapy is one of injection treatments and designed to stimulate healing. Various irritant solutions are injected into the ligaments, tendon and joint. Mechanism of prolotherapy is to stimulate healing through localized inflammatory reaction. The reaction leads to the normal wound healing process, which

ultimately results in deposition of new collagen at the injection sites. When we perform prolotherapy in sacroiliac joint⁸⁾, the targets are facet capsule, iliolumbar ligament, interosseous ligament, and dorsal sacroiliac ligament. Ultrasound guided prolotherapy is more accurate and less dangerous than conventional palpation technique.

CASE PRESENTATION

This thirty years old female complained intermittent low back pain. The pain is started 1 year ago and aggravated during care of her child. VAS score was 7. On physical examination, she had no limitation of lumbar motion, pain on end range of straight leg raising test, positive on thrust and Gaenslen's test. There was no specific abnormality on neurologic examination. She had no problem on daily activity 6 months after prolotherapy.

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