

## A new treatment option for chronic refractory coccygodynia: ultrasound-guided sacral erector spinae plane block

Dear Editor,

The sacral erector spinae plane block (SESPB), which was first described in 2018 by Tulgar et al. [1], has been shown to provide an effective block of the sacral sensory branches. Some cadaveric studies have suggested a sympathetic blocking effect that spreads to the anterior sacrum [2]. However, its exact mechanism of action remains unclear. Given these effects, the SESPB may be both less invasive and safer than caudal blocks.

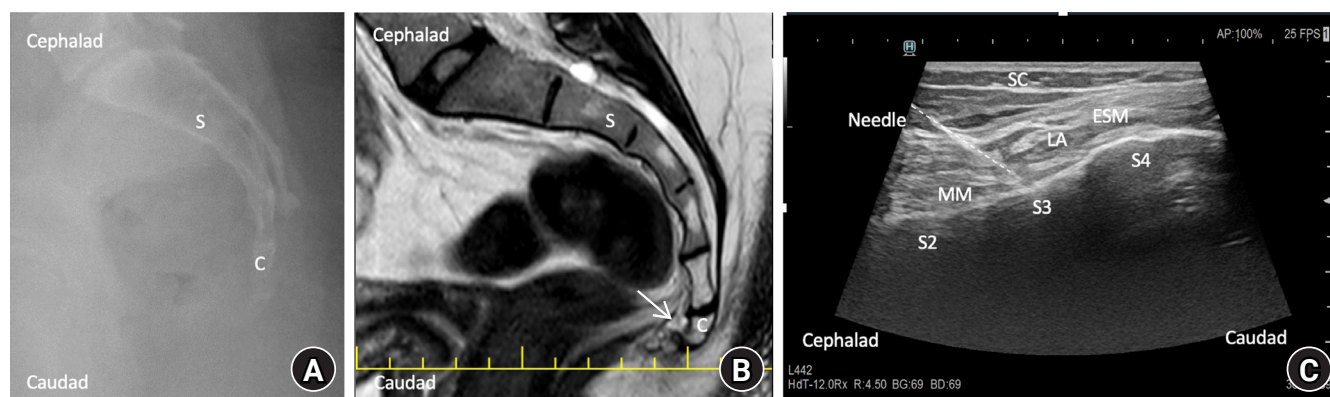
Pain associated with pathology in the most distal segment of the spine, known as the coccyx or tailbone, is referred to as coccygodynia. Coccygodynia can occur due to traumatic, non-traumatic, or idiopathic causes, with trauma being the most common cause. It has a negative effect on quality of life and is more common in women. Interventional treatment methods for coccygodynia do exist, including ganglion impar blocks, caudal epidural steroid injections, coccygeal nerve blocks, sacrococcygeal joint injections, and radiofrequency [3]. To the best of our knowledge, the SESPB has not been used for coccygodynia.

A 28-year-old woman (weight: 58 kg, height: 165 cm) was admitted to our clinic with a history of chronic coccygodynia due to a fall on

the coccyx two years previously that was not responding to conservative treatment. The patient had no neuropathic pain and had been using duloxetine 60 mg and simple analgesics for chronic pain for 6 months. Dynamic radiographs taken in the standing and sitting positions showed no abnormal mobility (Fig. 1A), and sacral magnetic resonance imaging showed no pathology except for anterior angulation (Fig. 1B). Due to a known thyroid condition, the patient preferred not to undergo a fluoroscopy-guided procedure. An ultrasound-guided SESPB was thus planned as a safe alternative option. She reported being able to sit comfortably on hard surfaces for only 15 min, experiencing pain while sitting even when using a seat cushion, and reported experiencing less pain when walking or lying down. In the outpatient clinic, a numerical rating scale (NRS; 0 = no pain at all, 10 = worst pain possible) was used to evaluate the patient's pain severity. The patient rated her pain intensity in the sitting position at an NRS score of 8/10.

After obtaining written informed consent, the patient was transferred to the operating room. Intravenous access was established and the patient was monitored for heart rate, basic blood pressure, and oxygen saturation. Under sterile conditions, a spinal needle was inserted at the level of the S3 intermediate sacral crest and the fascia between the multifidus muscle aponeurosis and erector spinae muscles was hydrodissected. A total of 10 ml of 0.25% bupivacaine and 4 mg of dexamethasone were injected for the blockade on one side (Fig. 1C). The same procedure was repeated contralaterally at the same level. No complications were observed.

After the procedure, the patient was asked to sit in a chair with a hard surface for at least 30 min, during which time she reported no



**Fig. 1.** Radiological images of the patient. (A) X-ray image of the coccyx taken in the standing and lateral position. (B) Magnetic resonance image of the anterior angulation of the coccyx in the sagittal plane. (C) Ultrasound image of the sacral erector spinae plane block performed at the S3 intermediate crest level. S: sacrum, C: coccyx, S3: sacral 3, ESM: erector spinae muscle, MM: multifidus muscle, LA: local anesthetic, SC: subcutaneous tissue.

pain, rated at a 0/10. At the one- and three-month follow-ups, she rated her pain under the same conditions as 2/10 and 4/10, respectively. Thus, a 50% decrease in the NRS score was observed during the follow-up period.

In the study conducted by Sencan et al. [4], a ganglion impar block administered with steroids was compared to a caudal epidural steroid injection for coccygodynia, and the effect of reducing In another study comparing the ganglion impar block with steroids to a local anesthetic alone, in both groups, the NRS score decreased statistically significantly in the 1st and 3rd month controls compared to the pre-procedure period, but when the groups were compared, a statistically significant difference was found in the 1st and 3rd month controls and it was observed that the steroid group was more effective than the local anesthetic group [5]. These findings are consistent with our study, which also found pain relief persisting for three months. One explanation for this may be the addition of steroids to the block. Another potential explanation could be that the SESPB, in addition to blocking the sacral nerve roots, provides a sympathetic block by spreading anteriorly. Therefore, we believe that administering an SESPB with steroids added provides a combined effect for long-term pain relief.

The SESPB is a safe block that is easy to administer and can be repeated if necessary. It may be effective not only for acute pain but also for chronic pain, such as coccygodynia. However, randomized controlled trials are required to evaluate its effectiveness.

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## Comment on “Retro superior costotransverse ligament space block as an effective analgesia after laparoscopic gastrectomy”

Dear Editor,

I read with great interest the case report published recently in the *Korean Journal of Anesthesiology* concerning a block performed at the retro superior costotransverse ligament (SCTL) space [1] and wish to present my reflections.

Lee et al. [1] state that “The retro superior costotransverse ligament space (RSS) block is a novel thoracic paraspinal block (TPSB)” [1]. However, this is just another intertransverse process (ITP) block with the retro SCTL space as a different target, as mentioned in the referenced article [2]. Furthermore, caution must be exercised over the term “thoracic paraspinal block” (TPSB), as it includes diverse blocks such as the erector spinae plane block (ESPB), retrolaminar block, and ITP blocks [3]. I would like to emphasize that the term “RSS block” should be avoided, as it is misleading and might confuse read-