The effect of intermittent levator massage with caudal block on management of levator ani syndrome

—A case report—

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Levator ani syndrome (LAS) is a functional disorder of the pelvic floor muscles in which recurrent and persistent distressing pain is felt in the anus without detectable organic pathology. Eighty one percent of coccygodynia was alleviated by the levator massage when the massage motion was repeated 10 to 15 times on each side of the pelvis daily for 5 or 6 days [1]. However, successive visiting pain clinic can be a burden to some patient.

The authors report a case of LAS that was successfully treated by intermittent levator massage with caudal block, once a week for 3 times, to result in two year pain free status.

CASE REPORT

A 59 year old woman visited pain clinic with complain of anal pain that had persisted for 2 years following excisions of right batholin duct cysts. The pain was recurrent rather than consecutive, rated 8 using the visual analogue scale (VAS), and usually precipitated by sitting.

On rectal examination in the left lateral decubitus position, severe tenderness was elicited at 4 o’clock at a depth of 6 cm from the anus. Digital examination of the levator ani muscle revealed a trigger area that exhibited exquisite local tenderness and contained a barely detectable soft, almost bean sized, nodular induration. In addition, there were mechanical allodynia and hyperalgesia around perianal region. Touching the trigger area caused severe anal pain. Other causes of the anorectal pain were excluded by additional investigations such as sigmoidoscopy, colonoscopy, transanal ultrasonography, and computed tomography. Accordingly, the patient was diagnosed as LAS.

The authors recommended levator massage for managing her coccygodynia. The patient complained that visiting pain clinic daily for 5 or 6 days might interrupt her daily life. Therefore, we decided to manage the LAS patient with intermittent levator massage with caudal block which was adopted to facilitate the blood flow to pelvic floor, once a week. Caudal block was performed in the Jack-knife position at the sacral hiatus. Under full aseptic conditions, a 22 G Tuohy needle was inserted into the caudal space using loss of resistance to air. After the neg-
to relieve the spastic or overly contracted levator ani muscle. Muscle relaxants [4], and biofeedback [5] have been proposed. However, all of these treatments offer only temporary pain relief. Therefore, some treatments - levator massage, sitz baths, tension such as stress, anxiety, and tension or “habit contraction” due to the poor posture, long-term physical or psychological forms of spastic or overly contracted levator ani muscle that is.

One of promising cause of levator ani syndrome is various causes of rectal pain, such as ischemia, inflammatory bowel disease, cryptitis, intramural abscess, fissure, hemorrhoids, prostatitis, and a solitary rectal ulcer, have been excluded [2]. In 75% of patients, the tender point is at the anterior area of the canal, especially on the left inferior pubic ramus, where the left arm of the levator ani or arcus tendineus is attached [3]. In this case, the patient had a tender point in left anterolateral area of levator ani muscle.

One of promising cause of levator ani syndrome is various forms of spastic or overly contracted levator ani muscle that is due to the poor posture, long-term physical or psychological tension such as stress, anxiety, and tension or “habit contraction.” Therefore, some treatments - levator massage, sitz baths, muscle relaxants [4], and biofeedback [5] have been proposed to relieve the spastic or overly contracted levator ani muscle. However, all of these treatments offer only temporary pain relief [6]. Another cause of LAS is the inflammation of the levator or arcus tendon. Since the levator ani muscle is inserted into the pubic ramus, the most common site of pain is the left inferior pubic ramus where the inflammation is apt to be occurred by tension. Therefore, trigger point injection using a mixture of steroid and lidocaine at the maximal tender point of the levator ani muscle may be used to manage LAS with limited success [3].

Eighty one percent of coccygodynia was alleviated by the levator massage when the massage motion was repeated 10 to 15 times on each side of the pelvis daily for 5 or 6 days [1]. In our patient, visiting pain clinic for 6 days interrupted patient’s daily life. Thus, we had to find out another strategy to relieve her coccygodynia.

It is not known whether the associated spasms of LAS are the primary disorder or are secondary to underlying psychological disease or pelvic neuropathy [7]. We postulated that spasm of levator ani muscle might aggravate the inflammation of the levator or arcus tendon and vice versa. Hence the authors thought that eliminating the inflammatory factors at spastic area by sympathetic blockade might prolong the therapeutic effect of levator massage. When muscles were metabolically stressed, sympathetic (vasoconstrictor) nerve activity was increased in muscle, then caused the release of central and peripheral neurogenic inflammatory factors. In addition, the increased vasoconstrictor activity may reduce the blood flow in the muscle where the trigger point is located, thereby causing delayed clearance of inflammatory substances and change in the local chemical milieu at the tender trigger points [8].

When adequate sympathetic block was made, blood flow was initially doubled even in advanced disease states. Hence, sympathetic block improved clinical outcomes by clearing the inflammatory substances at the trigger points [9]. And caudal block make the patients comfort during massage due to pain relief and spinal reflex block. Therefore, the authors decided to manage the patient using levator massage with caudal block once a week.

In this case, we report that intermittent levator massage with caudal block may be as effective as successive levator massage and induce longer painless period in the management of LAS.

**REFERENCES**

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