

Chronic Proctalgia from Leg Length Discrepancy Relieved by a Shoe Insole

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Abstract

Background: The pathophysiological mechanism behind chronic proctalgia is not fully understood. The study investigated whether treatment of lower limb length discrepancy (anisomelia) with an insole could relieve levator ani syndrome and chronic proctalgia.

Patients and Methods: Nine patients with proctalgia were identified as also having anisomelia. The patients underwent clinical evaluation, including proctoscopy, flexible endoscopy, anal ultrasound and a digital rectal examination to identify tenderness of the levator ani muscle. The patients were treated with an insole worn in the footwear of the short leg, and the effect was observed on proctalgia and tenderness of the levator ani muscle.

Results: The patients had experienced proctalgia for a mean of 41.8 months. The leg length discrepancy ranged from 1-3 cm. Eight patients had left-sided tenderness of the levator ani muscle. The tender levator ani muscle was on the same side as the short leg in five patients and the long leg in four. Two patients showed tenderness on both sides of the levator ani muscle, and three had additional tenderness from behind the rectum to the apex of the coccyx. All patients except one were completely relieved of proctalgia after treatment with a permanent insole worn in the footwear of the short leg, and digital examination showed no more tenderness of the levator ani muscle.

Conclusion: The study demonstrates that chronic proctalgia may be due to the levator ani muscle that has become strained and tender because of pelvic tilting from lower limb length discrepancy, a relationship which until now has been undiscovered. The pain was resolved by wearing a permanent shoe insert to compensate for the short leg. Patients with proctalgia should be examined for leg length discrepancy.

Results

The study included four female and five male patients, with a mean age of 60.2 years (range 46-80 years). They had experienced proctalgia for a mean of 41.8 months (range: 3-156 months), which had affected their life considerably. Patient #1 was a male who suffered for over 10 years and had to stop working and running and periodically required morphine for the pain; he has been treated for haemorrhoids by coagulation. Patient #2 was a male who had been admitted to the hospital several times for intense rectal pain, and a psychological explanation was considered. Patient #3 was an elderly female, who had received a stapled haemorrhoidopexy [6] for haemorrhoids four years earlier; however, her proctalgia first appeared only after she had a left-sided knee alloplasty. Patient #4 was a male who had previously sought treatment from different specialists, and tried physiotherapy and botox injections without achieving relief from the rectal pain. Patient #5 was a female, who, years earlier had a sigmoid resection for diverticulitis and later an operation for cysto- and rectocele. Patient #6 was a male who underwent an operation 12 years earlier for anal fistula, and who experienced worsened proctalgia after longer periods of physical

activity. Patient #7 was a female who had a hysterectomy five years earlier; followed by a colporrhaphy some years later; she also experienced constipation for many years and has to assist defecation by digital manoeuvres. Patient #8 was a male who also had intermittently use digits to facilitate defecation and who was treated for minor depression. Patient #9 was a female who suffered from constipation for many years, as well as faecal incontinence after childbirth with subsequent surgery; besides proctalgia, she had frequently right-sided lumbar pain extending to the leg.

The measured length of the right legs ranged from 86 to 95 cm and for the left legs 85 to 94 cm. Thus, the individual discrepancies in leg

proctalgia. This proves indirectly that the leg length discrepancy is the causal factor in these patients.

Patients with rectal pain will usually first be examined for a number of organic diseases, of which the most commonly involved are anal fissure, abscess, haemorrhoids, inflammatory bowel diseases, and cancer; gynaecological, urological and neurological diseases also must be considered [38]. However, no organic disease are found in the majority of cases (ca. 85%).

It has been previously assumed that the pathophysiological basis for chronic proctalgia is tension, spasm, or inflammation of the striated muscles of the pelvic floor [9-12]. Psychological assessment of patients with chronic anorectal pain often reveals high anxiety and depression levels [13]. Observations of a psychological pattern in affected patients and their responses to the symptoms have led to proposals of several pathophysiological hypotheses for functional anorectal pain syndromes [8]. Making comparisons with dogs, it has been thought that a spasm occurs from anxiety or stress, leading to the levator ani syndrome [8].

The role of leg length discrepancy as both a biomechanical impediment and a predisposing factor for associated musculoskeletal disorders has been controversial [14]. A retrospective study found that leg length discrepancy of greater than 20 mm affects at least one in every 1000 people [15]. Leg length discrepancy is implicated in a variety of disorders, including low back pain, hip pain and osteoarthritis, sacroiliac malalignment, trochanteric bursitis [14], stress fractures or osteochondritis [16,17], and plantar fasciitis [18]. Thus, chronic proctalgia is another possible manifestation of leg length discrepancy. However, it is unknown how often leg length discrepancy occurs without symptoms.

The proctalgia started in our patients when they were aged on line with other researchers [19]. Patients #5, #7 and #9 had undergone pelvic surgery and patient #3 a knee alloplasty. However, all patients had a tender levator ani muscle, which could not be a result of the surgical procedures, except for patient #3. Thus, the leg discrepancy seems to be congenital.

All patients, except one, had tenderness of the left levator ani muscle. In five patients, the tender muscle was on the same side as the

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