An Unusual Case of Lumbar Facet Arthropathy presenting with Pain Abdomen

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ABSTRACT

Introduction: Facet joint arthropathy refers to a degenerative disease that affects the joints of the vertebrae. Lumbar facet joints (zygapophyseal joint) were first suggested in the medical literature as a source of low back pain (LBP) and lower extremity pain in 1911. These joints have been implicated as the cause of pain in 15 to 45% of patients with chronic LBP. The majority of published clinical investigations report no correlation between the clinical symptoms of LBP and degenerative spinal changes observed on radiologic imaging studies, including radiographs, magnetic resonance imaging (MRI), computed tomography (CT), single photon emission CT, and radionuclide bone scanning. Low back pain from the facet joints often radiates down into the buttocks and down the back of the upper leg. Pain is rarely present in the front of the leg or below the knee. Our case report is about a 24-year-old female patient who presented with left-sided paramedian LBP with severe lower abdominal pain, who underwent several investigations for her abdominal pain and was treated for abdominal pain without any significant relief. Careful history and clinical examination revealed lumbar facet joint tenderness involving left L4–L5 and L5–S1 facet joint. Diagnostic block followed by radiofrequency (RF) ablation of medial branch supplying the corresponding facet joint was performed with near-complete pain relief.

Keywords: Diagnostic block, Facet joint, Zygopophyseal joint.

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INTRODUCTION

The lumbar zygapophyseal/facet joints are formed by the articulation of the inferior articular processes of one lumbar vertebra with the superior articular processes of the next vertebra (Fig. 1). Facet joints have been implicated as the cause of pain in 15 to 45% of patients with chronic LBP. Lumbar facet joint pain is more common in an older population. Degeneration, inflammation, and injury can lead to pain with joint motion. These disorders are some of the most common of all the recurrent, disabling low back and can cause serious symptoms and disability for patients. Facet joint pain is typically in the paravertebral region. Pain from the upper lumbar facets tends to extend into the flank, hip, and upper lateral thigh, whereas pain from the lower lumbar levels is likely to penetrate deeper into the thigh, usually in the lateral and posterior aspects. Symptoms are worse with extension and lateral rotation of spine.

Lower abdominal pain in case of lumbar facet arthropathy is an atypical presentation. We report an unusual presentation of lumbar facet arthropathy where along with LBP there was pain over lower abdomen. The patient was treated with RF ablation of lumbar medial branches following the successful diagnostic block (Fig. 2). There...
was significant relief in LBP along with abdominal pain following the intervention.

CASE REPORT

A 24-year-old female patient presented in our pain clinic with a history of LBP along with lower abdominal pain since 1 year. Intensity of this pain was 8/10 of numerical rating scale. Back pain was mainly in left paramedian area corresponding to L4, L5, S1 vertebrae along with left lower abdominal pain. Patient was relatively comfortable on sitting and lying down, but on extension and backward bending, pain was reproduced.

In the past, 2 years ago, patient had history of L5–S1 prolapsed intervertebral disk. For that, she underwent microdiscectomy. She remained pain-free for 7 months following microdiscectomy. Thereafter, she developed intense lower abdominal pain on left side along with LBP. For abdominal pain, she underwent CT scan abdomen, which was normal except for the presence of a 2.0 × 2.0 cm fibroid in the uterine wall. She consulted a gynecologist for abdominal pain and was treated for having fibroid uterus. Patient's pain was not relieved even after taking adequate medications.

On careful evaluation, we found paramedian tenderness over left L4–L5, L5–S1 lumbar facet joints. Extension and lateral rotation of spine aggravated her back pain. Following examination, the probable diagnosis of facet arthropathy was made. Diagnostic intra-articular block with 1% local anesthetic was performed to confirm the diagnosis, and patient reported 75% pain relief following block. On confirmation of diagnosis, we planned to go for RF ablation of medial branch supplying the corresponding facet joint on the next day. We performed three cycles of RF ablation with set temperature of 65° for 90 seconds after performing adequate sensory stimulation at 0.6 MV, 50 Hz and motor stimulation at 0.5 MV, 2 Hz. Needle placement was done under fluoroscopic guidance before sensory and motor testing (Figs 3 and 4). Following RF ablation, patient had near-complete pain relief.

DISCUSSION

Facet joint pain typically presents with paravertebral LBP, aggravated by extension and rotation of spine. This pain is reduced by flexion of spine. Tenderness elicited on corresponding facet joint region helps in clinical diagnosis. The area of most intense pain is usually slightly lateral to the involved joint and never crosses the midline.

In a study of 500 patients with chronic spinal pain, lumbar facet was responsible for 25% of all patients with chronic spinal pain. Diagnostic blocks play an important part in clinical diagnosis as X-ray does not correlate with the clinical symptoms. The CT and MRI also do not correlate well with the clinical symptoms. Pain in abdomen can be a manifestation of abdominal and extraabdominal pathologies. Referred pain from genitourinary tract, abdominal wall, thorax, and spine should be kept in mind and evaluated properly. So, for every case of abdominal pain with no obvious abdominal pathology, spine should be examined thoroughly.

Pain from spine is referred outward and downward from its source, in predictable patterns, as far anteriorly as abdomen and chest wall. The pain is usually deep and dull, and it can be aching and severe. Spine pathology can present with vague extraspinal symptoms, so it can lead to misdiagnosis. It can lead to unnecessary invasive and expensive diagnostic investigation. Lumbar spine problems are a rare cause of pain abdomen; a clinician should be aware of this and should always rule out the possibility.
CONCLUSION

The leading causes of misdiagnosis is (a) failure to spend enough time with the patient to take a careful history and (b) using the wrong tests, such as electromyography, MRI, and CT. Lumbar facet arthropathy may present with unusual feature like referred pain involving anterior abdomen. The diagnosis can be confirmed by diagnostic medial branch of corresponding facet joint with improvement of symptoms. It can be successfully treated with RF ablation of median branch.

REFERENCES