Musculoskeletal Etiologies of Pelvic Pain

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KEYWORDS

• Musculoskeletal • Lumbar spine • Pelvic pain • Pelvic girdle

KEY POINTS

- Pelvic pain includes disorders of the musculoskeletal system.
- Visceral disorders of the pelvis can be associated with musculoskeletal pelvic pain and dysfunction.
- Musculoskeletal disorders associated with pelvic pain may develop from disorders of the lumbar spine, pelvic girdle and hip.
- It is important for clinicians to assess for more than a single structure as a source of pelvic pain.

MUSCULOSKELETAL DIAGNOSES OUTSIDE OF THE PELVIC GIRDLE

Nature of the Problem

An estimated 22% of musculoskeletal diagnoses are frequently concomitant with pelvic floor pathology and pain.[1] The definition of pelvic pain itself often depends on the medical specialist evaluating the patient. To a urologist, this may be defined as a visceral disorder associated with visceral and somatic pain of the pelvic floor. A physiatrist may consider a pelvic girdle somatic disorder and its relationship to the hip and spine as sources of pain. Because there is such variability among disorders associated with pelvic pain, patients may seek treatment for extended periods as various treatment options are attempted. Further, health care providers should recognize that there may not be a single source of dysfunction. Patients with a painful bladder often have compensatory elevated resting pelvic floor muscle tone that results in concomitant muscle pain. Patients with S1 radiculopathy may develop increased resting tone of pelvic floor as compensation that leads to pelvic floor

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muscle pain. An increase in low back pain (LBP) may then be related to the increased intradiscal pressure created by increased pelvic pressure. The problem becomes cyclical, and the health care provider is challenged with what to offer to best break the cycle.

This article discusses the musculoskeletal disorders of the pelvic girdle (structures within the bony pelvis) and their association with lumbar spine and hip disorders.

It is essential for health care providers to consider these musculoskeletal diagnoses when evaluating patients with pelvic pain. Although musculoskeletal pathology may not be the primary cause, screening for and treating potential contributors to pelvic pain may lead to better treatment plans and avoidance of unnecessary procedures. Given the large percentage of patients with chronic pelvic pain of unknown cause undergoing surgical procedures, the American College of Obstetrics and Gynecology recommends a musculoskeletal evaluation before laparoscopy or hysterectomy. Because there is an overlap in disorders resulting in pelvic girdle pain (PGP), definitions for these musculoskeletal disorders in isolation are provided here.[2]

Definition

Pelvic girdle pain as defined by European guidelines for pelvic girdle pain

PGP generally arises in relation to pregnancy, trauma, arthritis, and osteoarthritis. Pain is experienced between the posterior iliac crest and the gluteal fold, particularly in the vicinity of the sacroiliac joint (SIJ). The pain may radiate in the posterior thigh and can also occur in conjunction with, or separately in, the symphysis. The endurance capacity for standing, walking, and sitting is diminished. The diagnosis of PGP is reached after exclusion of lumbar causes. The pain or functional disturbances in relation to PGP must be reproducible by specific clinical tests.

SPINE

Nature of the Problem

The lumbosacral roots, plexus, and peripheral nerves innervate the pelvic floor; therefore, pathology affecting the lumbar spine may present with overlapping symptoms due to the distribution of innervation and referral patterns. Lumbar spine disorders may refer pain in the distribution of the groin, with or without associated LBP. Lumbosacral plexopathies can occur secondary to trauma, tumor, metastatic lesions, and radiation-induced treatment effects.

Definitions

Discogenic pain: pain attributed to the intervertebral disc without radiating pain or sensory symptoms into the lower extremities.

Radicular pain: pain that radiates into the lower extremities within the distribution of the nerve root affected with no associated neurologic deficits.

Radiculopathy: sensory and/or motor deficits in a nerve root distribution with or without pain as a result of nerve root compression.

Lumbar plexopathy: pain that radiates to the lower extremities distal to the nerve root, from the lumbosacral plexus (L1-S4), with further subdivisions of the plexus.

Symptom Criteria

Patients may complain of LBP and buttock, thigh, groin, pelvis, or leg pain. Pain associated with radiculopathies and plexopathies often radiate into the pelvis or lower