Anorectal and Pelvic Pain

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Abstract

Although pelvic pain is a symptom of several structural anorectal and pelvic disorders (eg, anal fissure, endometriosis, and pelvic inflammatory disease), this comprehensive review will focus on the 3 most common nonstructural, or functional, disorders associated with pelvic pain: functional anorectal pain (ie, levator ani syndrome, unspecified anorectal pain, and proctalgia fugax), interstitial cystitis/bladder pain syndrome, and chronic prostatitis/chronic pelvic pain syndrome. The first 2 conditions occur in both sexes, while the latter occurs only in men. They are defined by symptoms, supplemented with levator tenderness (levator ani syndrome) and bladder mucosal inflammation (interstitial cystitis). Although distinct, these conditions share several similarities, including associations with dysfunctional voiding or defecation, comorbid conditions (eg, fibromyalgia, depression), impaired quality of life, and increased health care utilization. Several factors, including pelvic floor muscle tension, peripheral inflammation, peripheral and central sensitization, and psychosocial factors, have been implicated in the pathogenesis. The management is tailored to symptoms, is partly supported by clinical trials, and includes multidisciplinary approaches such as lifestyle modifications and pharmacological, behavioral, and physical therapy. Opioids should be avoided, and surgical treatment has a limited role, primarily in refractory interstitial cystitis.

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Anorectal and pelvic pain is a manifestation of several structural and functional disorders affecting the anus and rectum, urinary bladder, reproductive system, and pelvic floor musculature and its innervation. In contrast to structural diseases such as endometriosis, the pelvic pain in functional disorders cannot be explained by a structural or other specified pathologic process.[1] Functional disorders are classified into anorectal (eg, proctalgia fugax, levator ani syndrome, and unspecified anorectal pain), bladder (eg, interstitial cystitis [IC]/bladder pain syndrome [BPS]), and prostate syndromes (eg, chronic prostatitis [CP]/chronic pelvic pain syndrome [CPPS]). Interstitial cystitis/bladder pain syndrome is primarily diagnosed in women, whereas CP/CPPS is a diagnosis exclusive to men. Historically, these conditions have been regarded as distinct, and this review discusses them separately. However, more recent reviews emphasize the shared features between IC/BPS and CP/CPPS, which is captured by the term *urologic chronic pelvic pain syndromes*.[2] These urogynecologic syndromes also share several features with anorectal pain syndromes (Tables 1 and 2).

Expert panels have relied on evidence, supplemented by the Delphi process, to develop diagnostic criteria and treatment guidelines for these disorders. The aim of this review is to summarize the evidence on the epidemiology, natural history, pathophysiology, diagnosis, and management of these conditions. This review, which is updated from an earlier review,[3] incorporates the most recent recommendations, including the Rome criteria for anorectal disorders published in May 2016,[4] the American Urological Association guidelines for IC/BPS from 2015,[5] and a Prostatitis Expert Reference Group document on CP/CPPS from 2015.[6]

METHODS

For this review, we searched Ovid MEDLINE(R) In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R), and Ovid EMBASE. Although the topics overlapped, each was searched separately, and building on previous systematic reviews,[5,6] the searches extended back to 1995 for anorectal and mixed pain syndromes, 2008 for chronic pain, and 2014 for chronic prostatitis. The Medical Subject Headings of the US National

TABLE 1. Cardinal Features of Chronic Functional Anorectal and Urogynecologic Disorders

- Disorders are diagnosed by symptoms, supplemented by objective findings in interstitial cystitis and levator ani syndrome
- Predominant symptom is discomfort or pain; patients may also have dysfunctional voiding or defecation
- Frequently associated with a broad range of psychosocial issues (eg, anxiety and depression)
- Negative effects on quality of life
- Pathophysiology is poorly understood
- Therapy is largely symptomatic, guided by the primary symptom(s) and their severity, and includes pharmacotherapy, physical therapy, and psychosocial therapy

Library of Medicine (MeSH) term *pelvic pain* was expanded to include *dysmenorrhea*, *piriformis syndrome*, and *pelvic girdle pain* combined with either MeSH terms *chronic disease* or *chronic pain*. This concept was also searched by the term *chronic* appearing within 3 words adjacent to *pelvic pain* as text words. Chronic prostatitis was similarly searched using MeSH terms *prostatitis* and *chronic pain* or *chronic* appearing within 2 words of *prostatitis*. For anorectal pain, the only MeSH terms were quite general; the search used text words *levator ani*, *proctalgia fugax*, *puborectal myalgia*, *coccygodynia*, and *anorectal* within 2 words of *pain**. The strategies were then translated in the EMBASE vocabulary EMTREE, or text words, and run. Duplicates were removed, giving precedence to the MEDLINE results.

FUNCTIONAL ANORECTAL PAIN

On the basis of the duration of pain and the presence or absence of anorectal tenderness, functional anorectal pain disorders are categorized into 3 conditions: levator ani syndrome, unspecified anorectal pain, and proctalgia fugax. Patients with levator ani syndrome and unspecified anorectal pain have chronic pain or intermittent pain with prolonged episodes. Levator ani syndrome is associated with tenderness on palpation of the levator ani muscle.[7] whereas unspecified anorectal pain is not. By contrast, the pain in proctalgia fugax is brief (ie, lasts for seconds to minutes) and occurs infrequently (ie, once a month or less often) (Table 3).[8-15]

Epidemiology

In the only population-based survey, which was conducted in a sample of US householders in 1990, the prevalence of anorectal pain, levator ani syndrome, and proctalgia fugax, as determined by a symptom-based questionnaire (Table 3), was 11.6% (11.1% in men and 12.1% in women), 6.6% (5.7% in men and 7.4% in women), and 8% (7.5% in men and 8.3% in women), respectively.[16] The prevalence of anorectal pain was higher in those younger than 45 years (14% vs 9% in those ≥45 years). Similar trends were observed for levator ani syndrome and proctalgia fugax. Approximately 8.3% with functional anorectal pain, 11.5% with levator ani syndrome, and 8.4% with proctalgia fugax reported they were currently too sick to work or go to school.[16]

Pathophysiology

In levator ani syndrome, uncontrolled studies have implicated a role for pelvic floor muscle spasm, increased anal resting pressures,[17] and dyssynergic defecation, which is characterized by anorectal incoordination during defecation and often improves with biofeedback therapy (Figure 1).[18] In proctalgia fugax, the short duration and sporadic, infrequent pain episodes have limited the identification of physiologic mechanisms. Excessive colonic[19] and anal smooth muscle[20,21] contraction have been observed. Hereditary proctalgia fugax is associated with constipation and hypertrophy of the internal anal sphincter.[22]

Clinical Features

Among patients with constant or recurrent rectal pain, the pain is (ie, levator ani syndrome) or is not (ie, unspecified anorectal pain) associated with tenderness on palpation of the levator ani muscle (Table 2). When the pain is episodic, the episodes last 30 minutes or longer. The pain is a vague, dull ache or pressure sensation high in the rectum that is often worse in the seated than in the standing or lying positions. Patients with the levator ani syndrome often have psychosocial distress (eg, depression and anxiety) and impaired quality of life (QoL).[23] *Levator spasm, puborectalis syndrome*, *pyriformis syndrome*, *chronic proctalgia*, and *pelvic tension myalgia*

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