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# NewsLetter

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# High-tone Pelvic Floor Dysfunction with Bladder Pain Syndrome

### <u>Introduction</u>

High-tone pelvic floor dysfunction (HTPFD) also termed as hypertonicity of the pelvic floor musculature, nonrelaxing pelvic floor dysfunction, pelvic floor spasm, or myalgia of the pelvic floor. It is identified in a patient of Bladder Pain Syndrome (BPS) by presence of tender and hypertonic pelvic floor and associated musculature. This could be responsible for irritative and/or obstructive voiding symptoms and/or pelvic pain [1] in approximately 80% of BPS patients [2]. Its clinical importance stems from symptoms that may extensively overlap with BPS, making diagnosis of both conditions more challenging.

#### **Etiology**

The exact cause is not known, but may represent an aggravation or unmasking of hidden childhood voiding dysfunction [3], where BPS and HTPND both are primary pathologies but their co-existence can worsen the overall symptomatology. Some authors suggest that cross-talk through viscerosomatic and viscerovisceral neural pathways may play a bidirectional role in the development of IC/BPS and HTPFD [4]. Presence of altered activity and connectivity of pelvic floor sensorimotor cortical control regions in female patients of BPS on resting state functional MRI, indirectly support this theory [5]. Other etiologic consideration which can explain its presence as secondary to BPS include its development as guarding behaviour in response to bladder pain. Simultaneous presence of dyspareunia and painful defecation with typical worsening of symptoms of all these three organ systems during flare of BPS; strongly suggests this etiology.

#### Diagnosis

#### <u>History</u>

This condition usually present with *symptoms* like pelvic/perineal pressure, persistent urgency, the sensation of incomplete bladder emptying with interrupted poor flow in severe cases, urinary hesitancy (straining or use of abdominal pressure to initiate or complete voiding), need to sit for prolonged periods on toilet seat to evacuate the bowel and /or the bladder completely, constipation, dyspareunia (pain often experienced the next day of intercourse), and perineal, penile, and ejaculatory pain in males. The clinical diagnostic dilemmas generated by the presence of HTPFD include its ability to generate pain alone or in association with BPS, and the overlap of symptoms between these two conditions. The associated irritative symptoms may be confused for Overactive Bladder. HTPFD may also be responsible for complaints associated with other pain syndromes such as chronic prostatitis/chronic pelvic pain syndrome [6] and vulvodynia[7].

#### Examination

Physical examination should include a detailed palpation of the pelvic floor musculature and adjacent musculature.Hallmarks of HTPFD include the presence of hypertoniclevatorani (on Modified Oxford Grading system) with simultaneous spasm of nearby accessory musculature, muscle banding, and myofascial trigger points.The latter being described as tender "knots" in taut muscle band that produce pain on palpation[8].The studies suggest thatoverall myofascial trigger point can be identified on pelvic floor examination in approximately 78% of BPS patients, while multiple trigger points can be identified in 68% of individuals [2].

#### Investigations

Although not essential for diagnosis, video urodynamic evaluation will demonstrate poor relaxation of the external sphincter [9] in almost 70% to 94% of IC/BPS patients with HTPFD.

#### Treatment

The co-existence of HTPFD will either magnify the pain of BPS, or it may be the sole cause of symptoms. In both the cases, failure to diagnose HTPFD in the presumed BPS patient will commonly lead to a suboptimal response if we follow the typical algorithm of management strategies for BPS as suggested by many guidelines. The obvious reason is that treatment strategies differ between the two conditions. Therefore the treating clinician should be particularly concerned about the presence of HTPFD in the patient who endorses a history of dysfunctional voiding, bowel disturbances, and sexual pain; especially once the bowel and bladder disturbances originated in childhood [3]. On suspicion of HTPFD, a physiatrist/trained physiotherapist must be involved. The following multidisciplinary approach may be helpful to ameliorate symptoms [10]:

- 1. Behavior modification (avoidance of straining maneuvers, "reverse Kegels," stress reduction),
- 2. Topical heat application
- 3. Oral Medications e.g. skeletal muscle relaxants apart from selective use of pain killers
- 4. Control of constipation
- 5. Anesthetic or botulinum neurotoxin type A (BTX-A) injections at myofascial trigger point or affected muscles[11]

#### Conclusion

The common presence of systemic and regional pain conditions like HTPFD along with BPS is responsible for the complex presentation of this condition and to get a typical bladder-centric patient of BPS is actually rare in clinical practise. Therefore an individualized strategy of care will ultimately benefit these patients.

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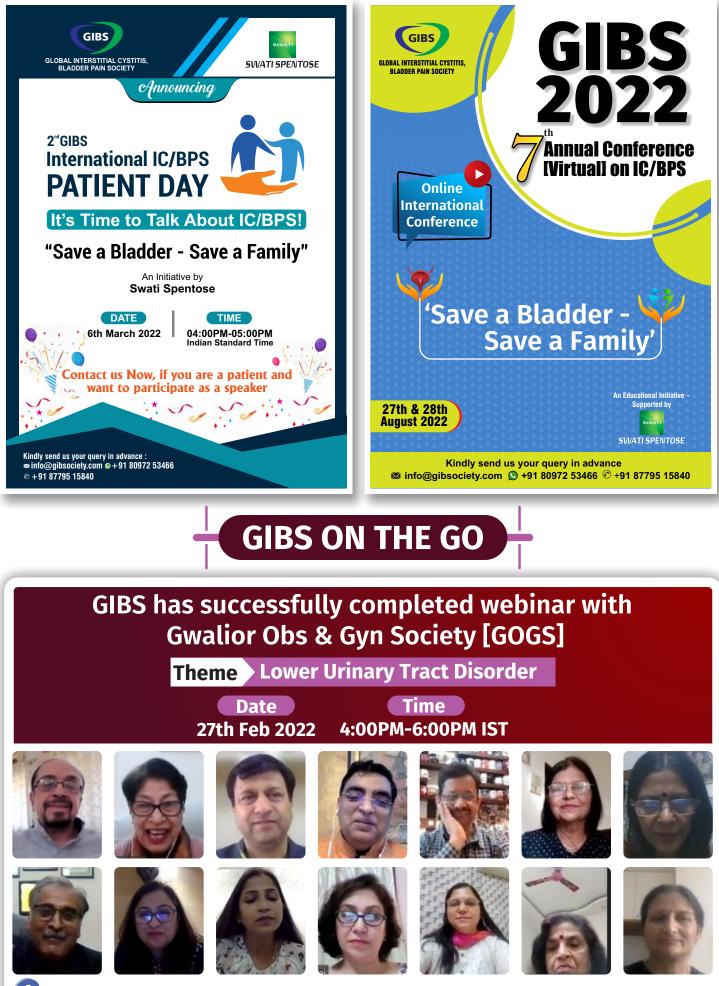


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