



Persistent Groin Pain after Urogynecologic Surgery

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Editorial

Pelvic Organ Prolapse (POP) and Stress Urinary Incontinence (SUI) commonly occur in today's older yet active women [1]. Symptoms that arise from these conditions can dramatically lower a woman's quality of life and herself esteem [2]. The most definitive treatment for both POP and SUI is surgical correction. A worrisome complication of any urogynecological reconstructive pelvic surgery is postoperative pain continuing beyond the expected twelve week convalescent period [3]. Postoperative groin pain can be challenging to both evaluate and effectively manage. In addition to the physical discomfort, the patient is often distressed by her physician being unsure of the etiology of her groin pain and therefore unable to completely treat her symptoms. Such persistent pain can occur after native tissue reconstructive surgeries as well as those utilizing synthetic mesh implants with a reported rate of 9.5% to 15.6% respectively even up to a year after the patient's index surgery [4,5]. Unfortunately due to the widespread plaintiff lawyer solicitation of "mesh complications" both patients and implanting surgeons become erroneously convinced that the mesh implant itself is causing the groin pain. The medial compartment of the thigh is often overlooked during the evaluation of patients with chronic "pelvic" pain after surgery. This medial compartment of the thigh, also commonly referred to as the groin, consists of ligaments, tendons, muscles and fascia. All of these structures attach to the pubic bone and assist with hip flexion, extension, and rotation. It is important to note that the abdominal muscles of the trunk also attach to the pubic bone. As a result of this complex anatomical arrangement, the groin functions as a "central hub" linking the muscles of the abdominal wall with those of the ipsilateral lower extremity. During prolonged extensive reconstructive pelvic surgery in the dorsal lithotomy position, or when the hips can be slightly hyperflexed during some portion of the surgery (i.e. Midurethral sling procedures), micro-tears can occur in the ligaments, tendons, and muscles located in the groin. These tears can lead to a weakening in the afflicted structures and compromise the stability of the pelvis. When other muscles try to provide compensatory stability, additional micro-tears will occur to create a cycle of chronic groin pain which can also radiate up towards the abdomen, down the inner aspect of the thigh, or across laterally towards the inferior aspect of the anterior inferior iliac spine. In some cases, this pain caused by localized inflammation from these micro-tears is misinterpreted as an "inflammatory response" to synthetic implants used in urogynecologic procedures. Primary excisional surgery to remove implanted transvaginal mesh to treat such chronic groin pain as a result of these soft tissue injuries will more often prove to be unsuccessful [6]. The groin pain caused from these micro tears can be of insidious onset, slowly progressing over several months. A thorough history with a detailed description of the pain complaint including timing of onset, the nature of the pain, exacerbating and alleviating factors, radiation of pain, and daily pain "cycle" is paramount for proper diagnosis. Usually the reported discomfort is similar to patients suffering with enthesopathy or tendonitis. Patients complain of pain that is unilateral, often "pulling" or sharp in nature that progresses to a consistent dull ache as the pain persists beyond the normal recovery period. Due to the interconnectivity of the groin musculature, the discomfort can radiate to surrounding areas like the lower hip, lower abdomen, proximal thigh, and the vagina. Patients can typically sleep fairly comfortably through the night but may experience extreme pain trying to get out of bed. Although the symptoms may partially resolve with periods of rest, the pain will return with activity and is exacerbated by strenuous exercise. On physical exam, several maneuvers can be performed to confirm that the patient's pain truly originates from the groin. Palpation along the inguinal ligament often reproduces the pain symptoms reported by the patient. Typically the pain can also be elicited on resisted hip flexion, resisted adduction of the thighs, and full passive abduction of the thighs. Since the pubic tubercle serves as an attachment point for most of the tendons and associated muscles in the groin, a careful examination of this bony prominence should be completed. One finger deep palpation right over the lateral aspect of the pubic tubercle usually results in the patient expressing

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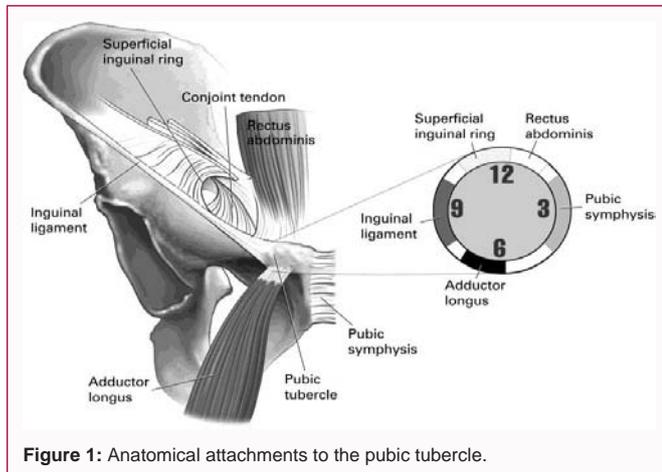


Figure 1: Anatomical attachments to the pubic tubercle.

acute discomfort. Although rare, the existence of a concomitant neuropathy should be evaluated, especially an injury to the Obturator nerve [7]. Obturator neuropathy is often associated with adductor muscle weakness (inability to bring the leg from a lateral to midline position), muscle spasm, and paresthesia over the medial aspect of the distal thigh. The Institute for Female Pelvic Medicine is a nationally recognized center for transvaginal mesh procedures and pelvic reconstructive surgery; therefore patients are commonly referred to the Institute for persistent groin pain possibly related to previous pelvic surgeries. If the patient's history and physical exam isolates the pain to the groin, our initial approach utilizes a trigger point injection which is both diagnostic and therapeutic. First the pubic tubercle is identified and a slow palpation is performed around the tubercle in a clockwise fashion to identify the point(s) of pain and anatomic structures involved [8] (Figure 1). Next the skin over the tubercle is appropriately cleansed. Since the pubic tubercle is fairly superficial in most patients, the injection is not deep. The needle is then angled towards the direction of the affected muscle, ligament, or tendon followed by slow injection of a Steroid/anesthetic solution (2 cc of Sensorcaine 0.5% mixed with 1 cc of Depo Medrol 40 mg/ml in 10 cc syringe). Typically a total volume of 3 cc is injected or 1 cc at each trigger point if multiple points are identified. Patients will typically feel immediate relief from their groin pain after the injection followed by a slower period of pain resolution. If a patient demonstrates only a partial response the injection is repeated in 4 to 6 weeks until their symptoms are minimized. In between injections pelvic rest, ice and deep massage to the trigger point area are recommended. A 7 to 10 day course of NSAIDs is also recommended to decrease baseline inflammation. A physical therapy program consisting of isometric exercises to strengthen the hip stabilizing muscles and proprioceptive training should be started. No increase in pain should be experienced during or after the exercises in order for the affected tissues to heal appropriately.

If a patient reports no abatement from their discomfort after the initial two injections, radiologic studies are used to investigate other etiologies of groin pain since the history and physical exams are similar amongst the various groin pathologies. Radiologic

studies may confirm the findings on physical exam and provide a definitive diagnosis for a patient's persistent postoperative groin pain. Ultrasound is the first-line imaging modality owing to its greater availability. Dynamic evaluation of structures with muscle contraction, joint movement, or position change of the patient may also add significant information that may not be obtainable with static MRI [9]. However given the anatomic complexity of the groin, MRI is currently regarded as the gold standard imaging modality [10]. In some cases, a multidisciplinary team approach may be needed to address the groin pain completely. Neurology consultation for suspected nerve involvement is crucial. A general surgeon can evaluate for a previously undiagnosed inguinal hernia. Other specialists may be needed depending on the imaging findings. Unless a concomitant material exposure or extrusion is present, excisional surgery to remove any vaginal mesh implants for groin pain is reserved until other etiologies are investigated and excluded.

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