AN UNUSUAL COMBINATION OF SYMPTOMS DUE TO AN UNUSUAL CAUSE: CHRONIC GROIN PAIN AND IRRITATIVE VOIDING SYMPTOMS CAUSED BY AN INTRA-PELVIC GANGLION COMPRESSING OBTURATOR NERVE

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ABSTRACT
Ganglion as a cause of groin pain is infrequent. In most instances the ganglia found around the hip are small and peri-articular. Intra-pelvic presentation of Ganglion is very rare and this condition as a cause of Obturator nerve compressive neuropathy and Irritative voiding is even rarer. Here, we describe an unusual intra-pelvic Ganglion causing chronic groin pain and voiding symptoms. In contrast to the infra-inguinal longitudinal approach normally adopted for the treatment of peri-articular ganglions, the present case could be treated by laparoscopy because of the intra pelvic location.


INTRODUCTION
Chronic groin and hip pain without obvious physical abnormality is a problematic condition to treat because of the multitude of anatomical structures present in the area and difficulty in pinpointing the diagnosis. Cystic lesions like Ganglion and Synovial cysts are seen occasionally around hip joint in imaging studies and can cause chronic groin pain.[1] In most instances the ganglia found around the hip are small, deep-seated, and not palpable. Large Ganglia are palpable and present as a groin mass. Intra-pelvic presentation of Ganglion is very rare and this condition as a cause of Obturator nerve compressive neuropathy and irritative voiding symptoms is even rarer.[2] Here, we describe an unusual intra-pelvic Ganglion and its treatment by Laparoscopy.
CASE REPORT

A 40-year-old male presented with one-year history of right groin pain radiating to the medial part of the thigh. The pain was worse on standing and relieved by lying down. The pain used to increase when urination was postponed and used to decrease after voiding. To avoid pain, patient started passing urine frequently. The patient was treated with medications and physiotherapy without any response. He had no history of trauma. On physical examination, there was no obvious swelling, but there was mild tenderness below the mid-inguinal point. There was paraesthesia in the medial part of thigh. There was no obvious muscle weakness.

Radiographs of Right hip revealed no abnormality. Due to high degree of suspicion, MRI of the pelvis was done which demonstrated a well-circumscribed cystic mass in the right pelvic sidewall. The signal characteristics were of fluid - low signal intensity on T1-weighed images and high signal intensity on T2- weighed images. The lesion was seen extending through the Obturator canal in to the upper thigh. The images were suggestive of a Ganglion cyst in the Obturator canal (Figure 1).

Fig. 1 MRI T2- weighed images showing high signal intensity of Ganglion. a Ganglion, b Bladder, c Hip joint.
Laparoscopic exploration was done and peritoneum was opened in the region of Obturator canal (Figure 2).

Fig. 2 Intraoperative pictures. a Obturator fossa opened, b Obturator nerve, c Ganglion, d Ganglion opened, e Decompressed nerve.

The cystic mass was separated from surrounding structures and was seen to impinge on the Obturator nerve. The cyst was separated from the Obturator nerve and then opened to empty the mucoid content. The cyst wall was sent for histopathology, which showed fibrous connective tissue lining without synovium. Postoperatively, the patient was relieved of the symptoms and was able to resume normal activity.

**DISCUSSION**

The obturator nerve arises from the lumbar plexus by the confluence of ventral rami of L2-L4. It is relatively well protected by its deep intra-pelvic location and surrounding muscles and fat. Obturator neuropathy is relatively uncommon; it is most frequently seen in the setting of pelvic mass, pelvic trauma or surgery and is related to mass effect and stretching. Mass effect on the nerve commonly occurs around the region of the obturator canal or as the nerve enters the thigh due to pelvic trauma, peri-articular cysts or bursae, or hernia.\(^{[3,4,5]}\)
The differential diagnosis of a cystic structure near a joint is includes Synovial cyst, Bursa and Ganglion cyst. Synovial cyst is an out-pouching of joint capsule lined by synovium and found in inflammatory conditions of joints like Rheumatoid arthritis and Osteoarthritis. Bursae are found at the points of musculo-tendinous friction and are lined by synovium. Ganglia may arise about any joint or tendon and histologically are lined by fibrocytes without a synovial lining. They contain a gelatinous fluid that is highly viscous secondary to the presence of hyaluronic acid and other mucopolysaccharides. When they press upon nerves or vessels, ganglia may become symptomatic. Near the hip, they may extend into the inguinal region and simulate adenopathy or hernia.[6] The distinction between ganglion and synovial cysts is frequently difficult to determine on imaging, so the terms are often used interchangeably.

The MR imaging appearance of the lesion reported here was compatible with that of a ganglion cyst and the position of the cyst near the Obturator nerve and Bladder explain the patient's symptoms. The lesion is situated in the lesser pelvis and compressed the obturator nerve to produce the neurologic symptoms. When the Bladder is full it is compressing the ganglion and in turn causing compression and irritation of Obturator nerve. This is truly an unusual cause in an unusual location and was successfully treated by Laparoscopy in contrast to an infra-inguinal longitudinal approach adopted for the treatment of peri-articular ganglions.

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REFERENCES