



Removal of Polypropylene Mesh by Chronic Inguinodynia after Inguinal Laparoscopic Hernioplasty: A Case Report

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Abstract

Background: Chronic pain in the inguinal region after hernia repair (inguinodynia) is an uncommon complication that results in pain and paresthesia at the operated site.

Case Report: A 46 years old male, submitted to laparoscopic bilateral inguinal hernioplasty that evolved with bilateral inguinodynia. The patient was successfully treated with the removal of the mesh by laparoscopy and did not have hernia recurrence.

Discussion: Inguinodynia affects a restricted group of patients after hernia repair. The best way to manage chronic postoperative pain is to prevent its manifestation. Therefore, the anatomical knowledge of the inguinal region is the cornerstone, combined with the proper manipulation and dissection of tissues and the correct use of fixation materials.

Introduction

Chronic pain in the inguinal region after hernia repair (inguinodynia) is an uncommon complication that results in pain and paresthesia at the operated site, and may be irradiated to the regions surrounding the inguinal canal [1]. However, the types of postoperative pain should be differentiated. They are: neuropathic or neuralgic pain (injury of the ilioinguinal, iliohypogastric and genitofemoral nerves), somatic pain (ligament insertions in the pubic tubercle) and "disejaculation or deafferentation" (painful sensation during ejaculation), the last one being less frequent [2].

The treatment of this complication is done through: non-hormonal anti-inflammatory drugs, and it may be associated with drugs for chronic neuralgia such as amitriptyline [1]; Cryoablation [3] or even removal of the prosthesis when the symptoms persists or conservative treatment fails.

Case Presentation

A 46 years old male, submitted to laparoscopic bilateral inguinal hernioplasty that evolved with bilateral inguinodynia. The patient presented pain on the inner thigh since the immediate postoperative period, even at rest, bilaterally, more intense to the right, with irradiation to the testicles. It was performed a magnetic resonance imaging (MRI), which demonstrated possible neuroma in the lateral portion of the rectus abdominis muscle on the right, with no other findings. Initial clinical treatment with non-hormonal anti-inflammatory, corticosteroids, and neuralgia medications (carbamazepine and amitriptyline) for three months had no effect. As an alternative, anesthetic block with ilioinguinal, iliohypogastric and genitofemoral bupivacaine was performed, however without success. After therapeutic failure, a new surgical intervention was indicated for prosthesis removal.

The patient was submitted to laparoscopy 6 months after his first surgical intervention. The portals were placed in usual position for inguinal hernioplasty according to Figure 1. Peritoneal opening was performed bilaterally, with dissection of the structures until the mesh was identified. After a meticulous dissection and release of adhesions and fibrotic tissues adjacent to the prostheses their removal was achieved, as well as all the surgical tacks inserted in the previous surgery and were noticed that some of them had a formation of granulomas (Figures 2 and 3). After revision of hemostasis the integrity of the bilateral inguinal canal and its structures were confirmed. It was decided for the synthesis of the peritoneum to use glue based on n-butyl-2-cyanoacrylate in order to promote good hemostasis and avoid the placement of new foreign bodies (tacks), thus reducing the patient's chance to remain with postoperative pain. The patient evolved satisfactorily and was discharged in the first post-operative day. The patient reported a significant improvement in pain

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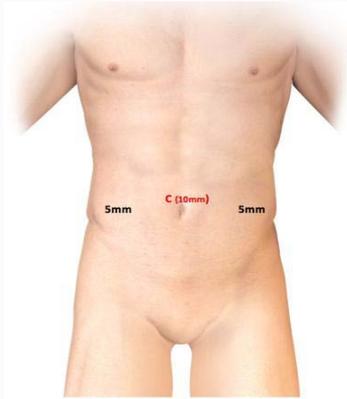


Figure 1: Trocar placements.



Figure 2: Polipropilene mesh removed with severe fibrosis.

at the time of hospital discharge. After 12 months of follow-up, he showed no signs of recurrence of neither hernias nor inguinodynia.

Discussion

Postoperative inguinal pain gained importance since laparoscopic intervention decreased this incidence, allowing better and faster postoperative recovery [2]. However, inguinodynia affects a restricted group of patients, both in open surgeries or through video surgery, which continue to be subject of debate regarding the best therapeutic management.

The nerves involved in the genesis of inguinodynia of neuropathic origin correspond to the lumbar plexus. The nerves that are injured in open surgery in order of frequency are: the ilioinguinal nerve, ilio-hypogastric and genital branch of the genitofemoral nerve. In laparoscopic approaches, the most frequent lesions occur in the branches of the femorocutaneous and ilio-inguinal nerves [4,5].

The diagnosis for inguinodynia is basically clinical and can be complemented by imaging tests such as computed tomography and MRI. An "objective" tool of great value is mapping by dermatomes, a technique that allows the evaluation of pain intensity and, above all, the type of dysesthesia present and the nerve branches involved [5].

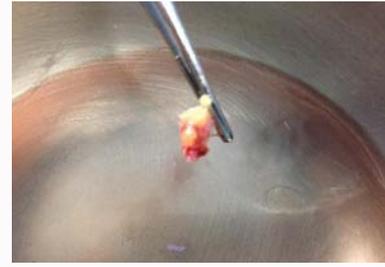


Figure 3: Fibrotic granuloma (tack).

Management of the patient with chronic inguinal pain depends on an accurate diagnosis. Somatic pain cases usually are relieved with the administration of analgesics and oral anti-inflammatories as well as neuropathic events [1,6]. If the pain continues, infiltration of the involved branches and trigger points determined on dermatome exploration must be performed with 2% lidocaine associated with corticosteroid every 2 weeks for 3 sessions. In case of symptoms persistence, removal of the prosthesis or the triple neurectomy may be indicated [1].

The best way to manage chronic postoperative pain is to prevent its manifestation. Therefore, the anatomical knowledge of the inguinal region is the cornerstone, combined with the proper manipulation and dissection of tissues and the correct use of fixation materials. There is a great discussion about the use of materials for fixation and closure of the peritoneum (tacks, absorbable suture or glue). In this context, the technique of totally extraperitoneal hernioplasty (TEP) would have a slight advantage over the transabdominal technique (TAPP) because there is no opening, and consequently, the need for peritoneal closure.

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