Posthernioplasty inguinodynia

Shrishail Adke 1, Ajith Ramakumar Varrior 1,2 Nibha Minj2

DESCRIPTION

A man in his early 60s who presented with complaints of pain in the right inguinal region for 15 years, which had aggravated since 2 months. There was no paraesthesia, hypoesthesia or hyperaesthesia. He had a history of Lichtenstein tension-free hernioplasty done 16 years back for a right indirect inguinal hernia. After excluding other common causes, appendicitis, renal calculi, funiculitis and gastroenteritis, the clinicians suspected nerve entrapment in the mesh, which was used during the hernia repair. Dermatomal mapping suggested involvement of the right iliohypogastric nerve. An MRI neurography was advised to confirm the clinical suspicion. There was thickening and entrapment of the right iliohypogastric nerve in the mesh at the level of the femoral head. The contralateral iliohypogastric nerve was normal (figures 1–3). The patient underwent a laparoscopic iliohypogastric neurectomy, following which the pain resolved (figure 4).

Inguinodynia, which is a chronic pain following the repair of an inguinal hernia, is a significant problem, and the incidence can be as high as 62.9% 1 year after the surgery. Chronic groin pain is potentially disabling with neuralgia, paraesthesia, hypoesthesia and hyperaesthesia. Patients may be unable to work and have limited physical and social activities, sleep disturbances and psychological distress.

Inguinodynia is generally classified as neuropathic pain and non-neuropathic, which is an inflammatory or nociceptive pain. The most commonly involved nerves posthernioplasty are the ilioinguinal nerve, the genital branch of the genitofemoral nerve and the iliohypogastric nerve. These nerves are known as the border nerves, as they lie at the junction of the lower abdomen and the groin (figure 5). Either these nerves may be involved in an isolated manner or multiple nerves may be involved.

Figure 1 Coronal stir MIP images show thickening of the right iliohypogastric nerve with entrapment in the hernioplasty mesh. Contralateral iliohypogastric nerve is not thickened.

Figure 2 Sagittal stir MIP images show thickening of the right iliohypogastric nerve with entrapment in the hernioplasty mesh.

Figure 3 Oblique stir MIP images show thickening of the right iliohypogastric nerve with entrapment in the hernioplasty mesh.

Figure 4 Intraoperative laparoscopic image shows thickening and entrapment of the right iliohypogastric nerve (straight arrow) within the hernioplasty mesh (arrowheads).
Radiofrequency ablation is a good method of treatment when conservative treatment has failed.5–8

Mechanical or thermal injury during surgical dissection and repair, nerve entrapment from sutures, staples, mesh and adhesions, or injuries related to the inflammatory response to prosthetic mesh material are factors contributing to nerve injury. Management of inguinodynia can be conservative, including lifestyle modification, analgesics (non-steroidal anti-inflammatory drugs, opioids, muscle relaxants, antiepileptics, steroids), physical/psychological therapies, nerve blocks or surgical neurectomy. The conservative management is temporary and non-curative. A nerve block can be either non-pharmacological (transcutaneous electric nerve stimulation, cryo-analgnesia) or by using pharmacological agents that act by either blocking the transmembrane ion channels or causing denaturation of the axonal proteins.3 Radiofrequency ablation is a good alternative to surgical management. It is non-invasive and can be performed in an outpatient setup without significant complications.4 Surgical neurectomy is the optimum method of treatment when conservative treatment has failed.5–8

**Patient's perspective**

I have been suffering from pain since many years with no proper diagnosis or permanent cure. However, now that I have been told about the condition and have been operated for the same, I am really grateful to the doctors.

**Learning points**

- Differentials for inguinodynia include traumatic neuroma formation, perineural scar tissue development and entrapment of nerves due to fibrosis and sensitisation.
- Meshoma is the formation of mass like soft tissue due to folding, wrinkling of mesh due to non-fixation, insufficient fixation or insufficient dissection to make adequate room for the prosthesis. Meshoma can also lead to pain by a volume effect or by mechanical pressure on nerves.
- The exact diagnosis mainly depends on concise history-taking, extensive physical examination and radiological imaging aids in confirming inguinodynia and ruling other causes for groin pain.

**References**


**Contributors**
The following authors were responsible for drafting of the text, sourcing and editing of clinical images, investigation of the results, drawing original diagrams and algorithms and critical revision for important intellectual content: SA, ARV, NM. The following authors gave final approval of the manuscript: SA, ARV, NM.

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Case reports provide a valuable learning resource for the scientific community and can indicate areas of interest for future research. They should not be used in isolation to guide treatment choices or public health policy.

**ORCID iDs**
Shrishail Adke http://orcid.org/0000-0002-6996-1569
Ajith Ramakumar Varrior http://orcid.org/0009-0005-8419-4459

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