Management of Peripheral Entrapment Neuropathy Following Abdominoplasty: A Case Report

Robin Guo, MD; and Ramon E.A. Jacobs, MD, SFHM

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In a systematic review by Ducic et al in this journal, the authors highlighted how important but underreported nerve injuries are after an abdominoplasty.\(^1\) Complications, such as chronic numbness or pain, can have extreme effects on a patient’s life. Although the total risk of any nerve injury has been reported to be 1.94%, this is likely an underestimation given that around 7.67% of patients report post-procedural hypoesthesia. The most commonly injured nerve related to surgical incision was the lateral femoral cutaneous nerve (1.36% of all patients). In contrast, there are only a handful of iliohypogastric nerve injuries resulting from abdominoplasties, representing 0.10% of all patients. Most notably, in their literature search, the authors were able to find only two reported cases of iliohypogastric nerve injuries in the literature. We hope to continue to bring attention to this underexplored adverse effect of abdominoplasty.

We present the case of a 39-year-old woman with right lower quadrant abdominal pain one month after an abdominoplasty performed in May 2015. She was evaluated at her plastic surgeon’s office on the day of presentation and was found to have a suture overlying her right abdominal incision site. Her wound was healing well and the suture was removed. As the patient was leaving the surgeon’s office, she began feeling pressure-like pain near the suture site. Several hours later, she experienced a stabbing pain radiating from her right flank to her umbilicus exacerbated by movement. The pain was not directly over the incision site, but along a linear distribution caudal to it. She denied fevers, chills, nausea, or vomiting. She immediately returned to her surgeon who reassured her that the site looked well. Her symptoms escalated further and she sought further evaluation at our emergency department (ED).

In the ED, the patient was afebrile and hemodynamically stable. Although no erythema was noted over the incision site, computed tomography scan of the abdomen and pelvis only demonstrated lower abdominal subcutaneous fat infiltration. No abscess or intra-abdominal pathology was observed. The patient was subsequently started on intravenous vancomycin for possible cellulitis and admitted to the general medicine service. The plastic surgery team was consulted and given the lack of fever, erythema, and leukocytosis, vancomycin was discontinued. However, pain control continued to be an issue for the patient during her hospital stay. On further examination, provocative testing over the iliohypogastric nerve distribution medial to the anterior superior iliac spine (ASIS) elicited a shooting sensation into her groin, suggesting post-procedural nerve entrapment. Initially, the patient was offered a peripheral nerve block by the anesthesia pain service. However, she elected to undergo conservative therapy. Subsequently, the patient was started on oral gabapentin 300 mg three times daily with improvement in her pain. Ultimately, she was discharged on gabapentin with follow-up in a multidisciplinary pain management center. Three months after her initial presentation, the patient reports that her pain has almost completely resolved and that she has only been taking gabapentin intermittently.

From the Division of General Internal Medicine and Clinical Innovation, Department of Medicine, New York University School of Medicine, New York, NY.

**Corresponding Author:**
Dr Robin Guo, 1320 York Avenue, Apt. 20M, New York, NY 10021 USA.
E-mail: robin.guo@nyumc.org
Nerve entrapment classically presents with burning or lancinating pain near the surgical site and the surrounding area of innervation. Pain can be accentuated by exertion and elicited with light pressure over the affected area. Nerve entrapment following an abdominal procedure can result from nerve stretching, nerve transection resulting in neuroma formation, or indirect neuropathy by nerve tethering from surrounding scar or edema, all possible mechanisms in our patient. Direct nerve injury commonly occurs with blind dissection of subcutaneous adipose tissue close to the lateral borders of the oblique muscles, risking injury to prematurely surfaced branches of ilioinguinal or iliohypogastric nerves. In addition, random “deep bites” of tissue, such as with suture placement near the ASIS, will increase the risk of nerve entrapment. Thus, prevention of nerve entrapment should focus on careful dissection and positioning.

Since nerve injuries typically self-resolve, treatment includes desensitization or sensory re-education, such as massage or frequent stimulation with running water. Case series in the literature have also reported resolution of symptoms after nerve blocks or, as with our patient, treatment with gabapentin. Peripheral nerve surgery, such as neuroma resection or neurectomy of entrapped nerves, is appropriate if symptoms do not improve in three months.

Iliohypogastric nerve entrapment is a rare and underreported complication of abdominoplasty. Although complication rates of abdominoplasty can vary anywhere from 22% to 50%, it is not uncommon for a patient with nerve entrapment to be given a psychiatric diagnosis prior to receiving the correct diagnosis. We hope our letter highlights a little known and often forgotten complication of abdominoplasty.

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REFERENCES