



# Obturator Nerve Injury: A Rare but Still Existing Problem for Gyn-Oncologists

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## Editorial

Intraoperative obturator nerve injury is rare complication in gynecological oncological surgeries when pelvic lymphadenectomy is performed. The incidence of the nerve injury does not seem to depend on the type of surgical approach, open or minimal-invasive technique (laparoscopic or robotic), trans-abdominal or retroperitoneal. We systematically reviewed the literature searching the terms “obturator nerve injury”, “pelvic lymphadenectomy” and “gynecological cancer” in PubMed, up to December 2021. We found only 12 papers addressing to this intraoperative problem, all of them case reports.

Obturator nerve obtains mixed motor and sensory nervous fibers and is formed of the second, third and fourth lumbar spinal cord roots. After originating from the lumbar plexus, it continues downwards through the posterior side of the psoas muscle, until it runs over the pelvic brim to enter the lesser pelvis. Then, it carries on passing through the obturator foramen, along with the obturator artery and vein, until it leaves the pelvis [1].

The obturator nerve is an important landmark during pelvic lymphadenectomy for gynecological malignancies. During this procedure, injury can occur either indirectly by thermal damage or directly by crushing, ligating or partially/completely nerve sectioning, after blunt or sharp dissection [2]. These types of lesions lead to inconstant sensory loss over the medial thigh of the affected side, groin or medial thigh pain and weakness with leg adduction.

The critical parameter for the successful management of obturator nerve injury is time. The irreversible clinical consequences of the injury can be prevented by immediate nerve repair, with the golden period for their pair to be within the first hour of the injury [3]. Therefore, it is necessary that the Gyn-Oncologist inspects the integrity of the obturator nerve at the end of each side’s lymphadenectomy, as part of his/her standard procedure, so if a nerve damage is recognized, to respond immediately. During lymphadenectomy, 80% of the reported injuries concern the proximal part of the obturator nerve, while 20% the distal one. Consequently, special attention should be given to this part of the nerve [4,5]. Usually, total resection occurs, while partial neurotmesis has been more rarely reported [6].

The best option is to have the assistance of a neurosurgeon, who is obviously much more familiar with nerve’s repair. Unfortunately, a neurosurgeon is not always available in many centers worldwide. Consequently, the Gyn-Oncologist should have the skill to repair it himself, with the exception, of course, of cases which need nerve graft that are beyond our field of expertise and therefore neurosurgical assistance is mandatory.

The key point for this repair is to prepare the nerve without torsion and perform a tension-free end-to-end anastomosis using very thin 4-0, 5-0, or even 6-0 prolene sutures in a co-axial manner. Postoperatively, we suggest long term, high dose Vitamin-B complex use.

In conclusion, we urge all senior Gyn-Oncologists colleagues to share and teach their fellows the surgical management of this rare complication every time they face this problem, due to their limited opportunities to gain such experience.

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