

## LAPAROSCOPIC APPROACH TO PUDENDAL NERVE ENTRAPMENT

### Introduction

Pudendal Nerve Entrapment (PNE) is an uncommon source of chronic pain, in which the nerve is entrapped or compressed as it leaves or enters the pelvis in various tunnels created by adjacent muscles, tendons or bony and ligamentous tissues. The symptoms of PNE syndrome occurs from changes in nerve function and structural changes in the nerve that arise from the mechanical effects of compression. This syndrome presents with pain, hypo or hyperesthesia, anal incontinence, urinary incontinence and impotence. The diagnosis of pudendal neuralgia is essentially clinical, and Nantes criteria were described in 2008 to help physicians recognize pudendal neuralgia. Surgical treatment of PNE can be performed with different approaches, but Laparoscopy is the only method which enables us to confirm diagnosis and to treat the patient at the same time. We describe our experience with laparoscopic management of PNE.

### Design

We present the case of a 68-year-old woman who was referred to our service with chronic pain in the right anogenital side, allodynia, vaginal foreign body sensation and high urinary frequency without urgency. The physical examination shown right hypoalgesia without other pathologies. MRI was normal and neurophysiology tests (pudendal nerve motor latency test and electromyography) shown right abnormalities. Because of a lack of response to medication, pudendal nerve block and local radiofrequency, surgical option was offered. The functional integrity of all exposed nerves is assessed using intraoperative laparoscopic electrostimulation. Before surgery, electrodes are placed at both legs, feet, major labia and external anal sphincter. For laparoscopic approach we used 5 trocars similar to other uro-oncologic pelvic surgeries.

### Results

The external iliac vein was identified and the peritoneum was incised between the ureter and external iliac vein. Careful blunt dissection techniques were used to create a peritoneal window medial to the obturator nerve after obturator lymphadenectomy. Blunt dissection downwards allows exposure of the sacrospinous ligament (SSL). Dense and thickening SSL is identified and bluntly dissected from sacral roots. The SSL is then divided with a cut and seal instrument. Full exposure of the pudendal nerve begins with exposure of its endopelvic segment, followed by the transection of the SSL, which permits further dissection of the nerve downward to Alcock's canal. From the proximal side of the canal, the upper wall is opened with incision of the aponeurosis. Finally, the pudendal nerve can be completely decompressed at the entrance of the canal. The patient was discharged at the third day of the surgery without complications. She referred pain improvement out of a 70% on a Visual Analog Scale instantly after the surgery, with improvement of the urinary frequency and foreign body sensation after 6 months.

### Conclusion

Laparoscopic has become feasible and allows the surgeon a global vision of small nerves and provides a minimally invasive and safe exposure of all pelvic nerves but, obliges the surgeon to have better knowledge of pelvic anatomy. In combination, electrostimulation permits an intraoperative functional mapping of the pelvic nerves.

### Disclosures

**Funding:** We didn't use any source of funding. **Clinical Trial:** No **Subjects:** HUMAN **Ethics not Req'd:** The patient gave the permission and signed consent to record the surgery and the different uses of the video **Helsinki:** Yes **Informed Consent:** Yes