

INTRAPELVIC NERVE ENTRAPMENTS – A NEGLECTED CAUSE OF PERINEAL PAIN AND URINARY SYMPTOMS.

Hypothesis / aims of study

The intrapelvic portions of the lumbosacral nerves are best approached by laparoscopy.[1] However, in addition to lower urinary tract symptoms and unilateral perineal pain, intrapelvic nerve entrapments usually produce symptoms that are not associated with urologic or gynecologic practice, such as sciatica.

The aim of this study is to evaluate the outcomes of the patients submitted to the laparoscopic decompression of lumbosacral nerves, as well as the delay in diagnosis.

Study design, materials and methods

Data charts from all patients submitted to the laparoscopic decompression of nerve roots from December 2009 to January 2015 were analysed. In these patients, visual analog scale (VAS) score are used in every evaluation to assess pain severity. Paired t-Test was used to compare preoperative VAS score and the score from the last follow-up visit.

The time for the onset of symptoms was recorded as reported by patients on the first preoperative consultation.

The number of previous surgeries took into account only the procedures directed at treating symptoms related to the lumbosacral nerves entrapment.

Success was considered a reduction of 50% or more on VAS score and/or significant reduction on pain medication.

Results

In total, 28 women and 1 man were operated during the inclusion period. Of those, 22 were referred by gynaecologists, 4 found our clinic by our website and 3 were referred by othopedists.

The affected nerves and etiology of the intrapelvic entrapments and clinical and surgical data are displayed on tables 1 and 2.

Table 1. Etiology and localization of nerve entrapments

Etiology	#of cases	Affected Nerves	#of cases
Endometriosis	13	Pudendal Nerve Only (Alcock's Canal)	3
Vascular Abnormalities	8	S2-S3-S4 nerve roots	9
Fibrosis	5	Obturator Nerve	1
		Ciatic Nerve Only	8
Pyramiformis Muscle	3	Ciatic and Pudendal Nerves	6
		Ciatic and Obturator Nerve	1
Total	29		29

Table 2. Clinical Variables

Variable	Avg.	Median	Std. Dev.	p
Age	39,71	38,16	9,87	-
Follow-up (months)	19,18	15,61	16,86	-
Preoperative VAS	8,93	10,00	1,85	-
Postoperative VAS	3,17	3,00	3,22	0,0000000007*
Operating Time (minutes)	172,59	163,00	81,44	-
Previous Surgeries	1,72	2,00	1,71	-
Interval between onset of symptoms and Diagnosis (years)	5,34	4,00	4,35	-
Success Rate	23/29(79.3%)			

* paired t-Test

Perioperative complications were: one pudendal nerve transection, one obturator nerve tearing due to excessive traction during exposure, one case of bladder hypoesthesia, one ureteral lesion and one case of rectal pain.

Interpretation of results

Intrapelvic nerve entrapment is an extremely painful condition mostly unknown for most physicians. The fact of that most referrals come from gynaecologists is the result of intense publication work on pelvic and perineal pain related congresses, which has progressively been raising awareness about this condition among these specialists.

As it is well-known in peripheral nerve entrapment syndromes, the longer the lag between the onset of symptoms and nerve decompression, the higher are lower are the chances of cure, due to the cytoarchitectural changes that chronic compression induces to both peripheral[2] and central neurons[3]. These changes are often irreversible. In our series, the average time between the onset of symptoms and correct diagnosis was 5.3 years and patients had undergone in average almost 2 ineffective procedures to ameliorate symptoms. This is compatible with data from other centers.[1]

The laparoscopic approach to the lumbosacral plexus produces satisfactory cure rates through a minimally invasive approach, with 79.3% of patients reporting at least 50% improvement of pain in our series. These results are similar to other center[1] using the same technique, which shows the reproducibility of the laparoscopic approach.

Concluding message

The laparoscopic detrapment of intrapelvic nerves produce satisfactory and reproducible results.

Intrapelvic nerve entrapments are little known to physician and awareness must be raised to improve the time lag between the onset of symptoms and the correct diagnosis and avoid unnecessary and ineffective surgical procedures.

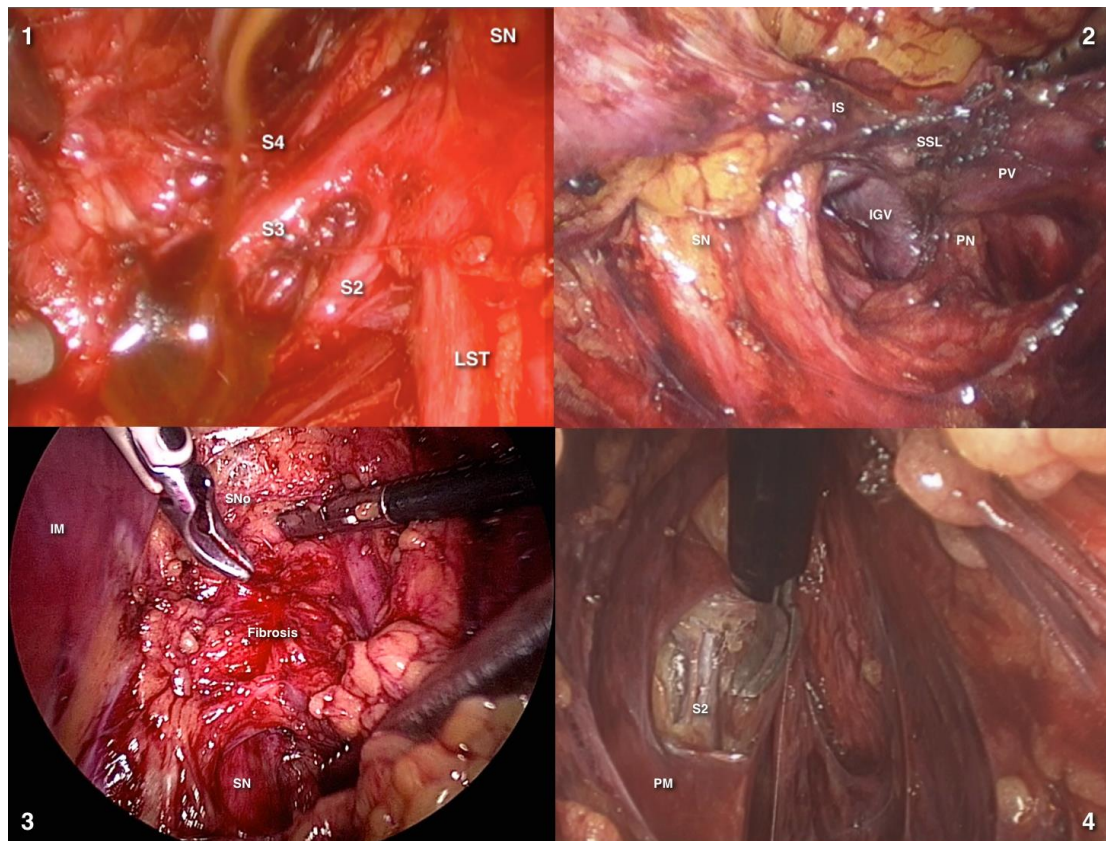


Figure – The four etiologies of intrapelvic nerve entrapment: endometriosis (1), vascular entrapment (2), fibrosis (3) and piriformis muscle (4). SN – Sciatic Nerve; SNo – Sciatic Notch; LST – Lumbosacral Trunk; IS – Ischial Spine; SSL – Sacrospinous Ligament; PV – Pudendal Vein; PN – Pudendal Nerve; IG – Inferior Gluteal Vein; IM – Iliac Muscle.

References

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Disclosures

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