

FUNCTION OF PELVIC FLOOR MUSCLES IN WOMEN WITH CHRONIC PELVIC PAIN WITH AND WITHOUT INTRAPELVIC NERVE ENTRAPMENT.

Hypothesis / aims of study

The aim of this study was to evaluate and compare the function of the pelvic floor muscles in women with chronic pelvic pain with and without intrapelvic nerve entrapment.

Study design, materials and methods

Fifty-one women with ages between 18 and 50 years were included in this cross-sectional study after medical diagnosis of the cause of chronic pelvic pain (CPP). After evaluation and medical diagnosis, women were divided into two groups, the study group had 11 women with diagnosis of CPP caused by intrapelvic nerve entrapment (surgically confirmed), and the control group consisted of 40 women with diagnosis of CPP secondary to superficial endometriosis without intrapelvic nerve entrapment.

All women underwent digital palpation of the pelvic floor performed by a specialized physical therapist, and the function of the muscles was classified according to the Oxford scale (0-5).

To compare the results of Oxford scale and ages, the Student t test, average, median and standard deviation were used.

To verify the correlation of age and Oxford scale, the Pearson correlation test (r) was performed because of the variation of age between groups.

Results

The groups are not homogeneous regarding age ($p < 0.01$), the study group consisted of women with 41.18 (± 5.6) years and the control group 31.28 (± 4.95).

The results obtained in Oxford scale are described in the table below.

Table 1. Oxford Scale between groups

Group	median	Average	Standard Deviation
Study	1	1.72	1.34
Control	3	2.72	1.3

* $p = 0.02$

Pearson's correlation test revealed no correlation between age and pelvic floor function: $r = -0.01$ with significance 0.95 for the study group and $r = -0.02$ with significance of 0.87 for the control group.

Interpretation of results

One of the most common causes of CPP is endometriosis, which, in addition to CPP, may cause dysmenorrhea and deep dyspareunia [1]. With its prevalence probably underestimated, intrapelvic nerve entrapments (eg sciatic, pudendal nerve) are another important factor to be considered. In addition to CPP, symptoms commonly associated with intrapelvic nerve entrapments are urinary, faecal or sexual dysfunction. These symptoms are also common in women with CPP with and no signs of nerve entrapments.

Chronically, nerve entrapments can lead to other symptoms like decreased muscle strength, movement and muscle atrophy, secondary to the axonal damage.[2] Therefore, axonal damage is, probably the reason for the pelvic floor muscles function observed in women with intrapelvic nerve entrapments [3].

Despite the differences in age between, the Pearson correlation test showed that there is extremely weak negative correlation ($r < 0.3$) between age and of the Oxford scale score, indicating little or no influence of age on the difference of pelvic floor muscles function observed between the two groups. Since these are sequential samples, the difference in age is probably secondary to the delay in diagnosing intrapelvic nerve entrapments.

Concluding message

We conclude that the function of the pelvic floor muscles in women with pelvic pain secondary to intrapelvic nerve entrapments is worse than women with pain secondary to superficial endometriosis without nerve impairment.

In these cases pain can be associated to urinary symptoms, defecation difficulties, sexual dysfunction and decreased muscle strength of the pelvic floor, physical therapists and physicians should work together for a better diagnosis and management of the pelvic floor dysfunction.

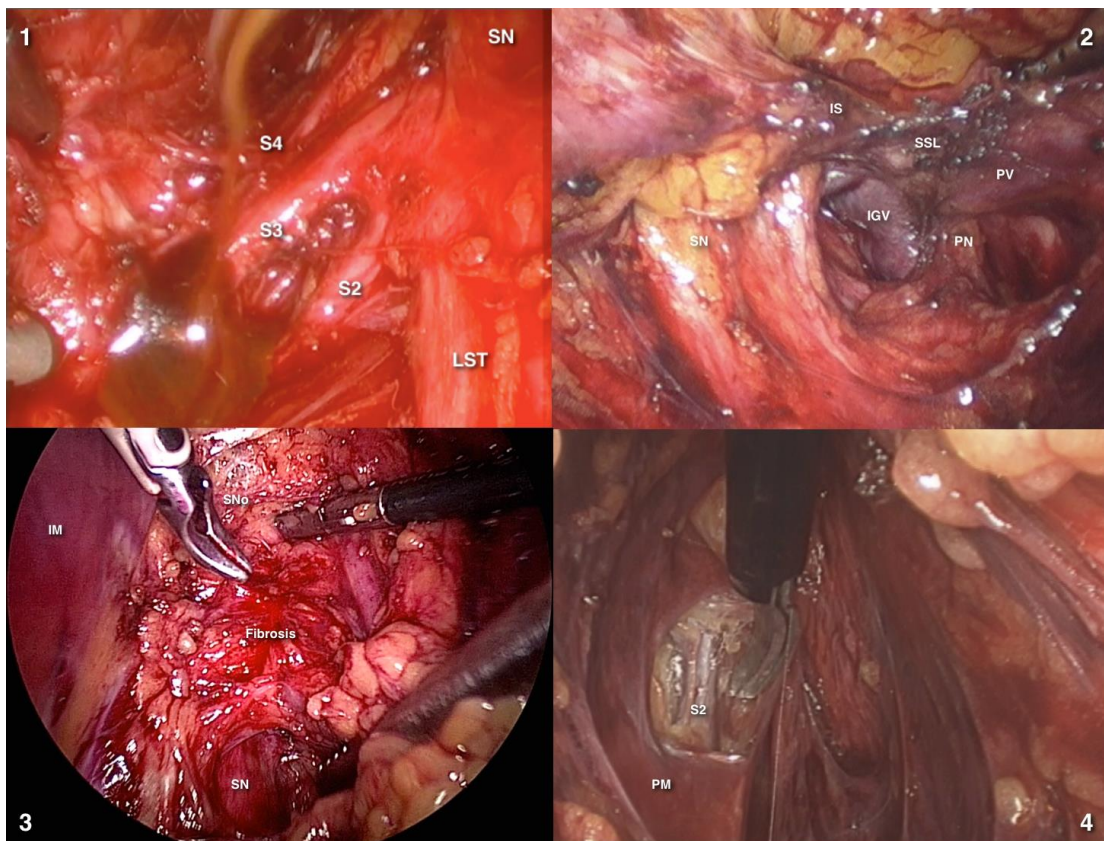


Figure – The four aetiologies of intrapelvic nerve entrapment: endometriosis (1), vascular entrapment (2), fibrosis (3) and preforms muscle anatomical variations(4). SN – Sciatic Nerve; SNo – Sciatic Notch; LST – Lumbosacral Trunk; IS – Ischial Spine; SSL – Sacrospinous Ligament; PV – Pudendal Vein;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

References

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Disclosures

Funding: Search no coasts **Clinical Trial:** No **Subjects:** HUMAN **Ethics Committee:** Comitê de Ética em Pesquisa da Unifesp **Helsinki:** Yes **Informed Consent:** Yes