IMPROVEMENT OF REFRACTORY PELVIC MYOSFACIAL PAIN WITH INCOBOTULINUMTOXINA

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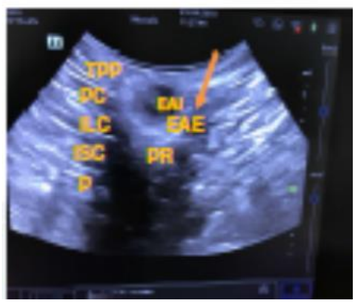
Introduction

- Included among the entities that encompasses the term Chronic Pelvic Pain (CPP) is the pelvic myofascial syndrome, which consists of a regional painful disorder that affects the pelvic floor muscles and fascias so that the muscles involved have trigger points as an associated component [1].
- Myofascial pelvic pain (MFPP) is a frequently unrecognized and untreated component of chronic pelvic pain (CPP). A recent study that screened patients with chronic pelvic pain for MFPP or pelvic floor trigger points via interview and physical examination found that 13.2% had pain that was related to the PFMs [2]. In a study of women in a CPP clinic, PFM tenderness was an isolated finding in 15% of these patients but was associated with other CPP disorders in 58.3% of patients versus 4.2% of healthy volunteers. Of the women in the CPP group, 89.0% had tenderness of the levator ani muscle, 50.8% had tenderness of the piriformis muscle, and 31.7% had tenderness of the internal obturator muscle [3].
- A comprehensive musculoskeletal examination, including evaluation of the pelvic floor muscles, and history are key to diagnosing myofascial pelvic pain. Treatments include physical therapy, muscle relaxers, oral neuromodulators, cognitive-behavioral therapy, and trigger point injection of various substances, including local anesthetic agents, steroids and botulinum neurotoxin [4].
- Several studies have reported that the injection of botulinum neurotoxin type A (BoNT-A) in the pelvic floor muscles is a safe and effective treatment in patients with refractory chronic myofascial pelvic pain [5]. BoNT-A shows antinociceptive effects that may be caused by the suppression of neurotransmitters and neuropeptides involved at the peripheral level in the genesis of pain and as a consequence, it can also reduce central sensitization. This study assessed the efficacy of IncoBoNT-A injections in the pelvic floor muscles to improve refractory pelvic myosfacial pain.

Methods

- A follow-up cohort study of 14 adult patients with CCP from different etiologies refractory to NSAIDs, opiods and other interventional techniques (nerve blocks and sphincterotomy) was performed.
- The MFPP subjective history was examined and a musculoskeletal screening and pelvic floor muscle assessment was performed to assess pain.
- The intensity of pain was quantify by the change in overall pain score using the Visual Analogue Scale (VAS) before and 3 months after IncoBoNT-A injection.
- The administration of IncoBoNT-A in the pelvic floor muscles was performed under ultrasound guidance. Subsequently, 100 U of XEOMIN was reconstituted with sodium chloride 9 mg/ml (0,9%) solution for injection into a 1-mL syringe. At least two injection points were performed per patient, depending on the affected area.
- Statistical analysis: data are presented as mean±SD, Student-t-test for dependent samples.

Results



- The average age (range) of the patients was 54.2 (31.3-69.2) years (9 females, 5 males). In Table 1 the diagnosis, time of disease progression and muscles injected are shown.
- Average time of evolution of pelvic pain was 7.4 (2.0-20.0) years. Mean IncoBoNT-A injected dose was 76.2 (30-100) U. External anal sphincter muscle was the most frequently injected (7 injections).

Example of pelvic floor muscles localization using ultrasound: EAI, internal anal sphincter; EAE, external anal sphincter; PR, puborectalis; TPP, deep transverse perineal; PC, pubococcygeus; ILC, iliococcygeus; ISC, ischiococcygeus; P, piriformis

Results (cont.)

- Mean pain VAS score was 7.7 (6-10) before injection and 2.9 (0-7) after treatment. A mean reduction of 4.8 (CI95%: -6.2 – -3.5, p=0.001) score in EVA was observed. In Figure 1 the decrease in the VAS score 3 months after injection of IncoBoNT-A is shown.
- Safety: Of the 14 patients included in the study, one reported gas incontinence for 15 days. No other adverse event related to treatment were recorded, no case of stool incontinence occurred when anal sphincter was injected nor urinary incontinence for the rest of injections.

Figure 1. Mean decrease of VAS pain scale 3 months after IncoBoNT injection

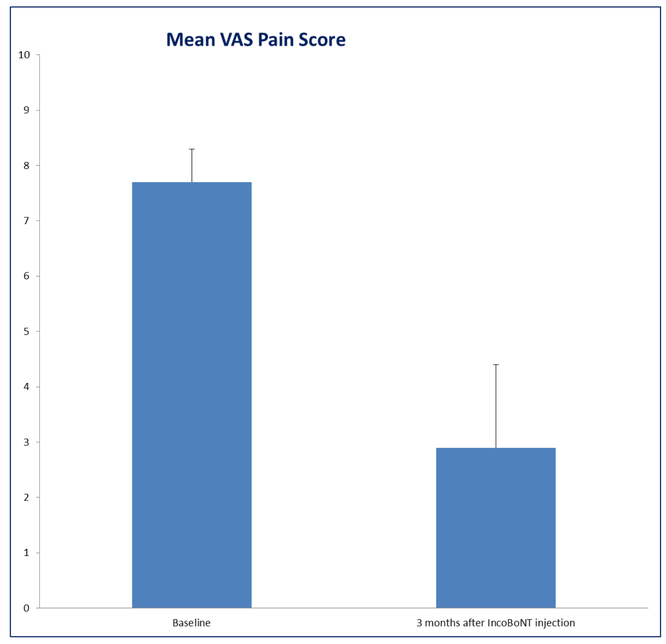


Table 1. Diagnosis, time of disease progression and injected muscles in each patient

Pat	Diagnosis	Time of disease progression (years)	INJECTED MUSCLES
1	Pain by anism and hypertony of CNP	14	EAE, CNP
2	Coccydynia	2	Para-coccydinia Muscles
3	Anism	5	EAE + STP
4	Chronic pelvic pain, anal pain	2	EAE and PR
5	Rectocele post-surgery coitalgy	5	IO + STP
6	Pudendal neuropathy	14	IO
7	Perineal myofascial pain+ pudendal neuropathy	3	Labium majus, CNP, PV, IO
8	Chronic pelvic pain + anism + myofascial syndrome	5	IO, EAE, PR
9	Chronic pelvic pain + myofascial syndrome	6	bilateral IO + NCP
10	Puborectalis hypertony with chronic constipation	10	PR
11	Chronic pelvic pain + puborectalis hypertony	5	PR
12	Chronic pelvic pain + anism after colon surgery	5	CNP + STP
13	Pubalgia, right adductors tendonitis	2	Aducctors magnus & longus
14	Chronic pelvic pain + anal pain	20	EAE

CNP; Central Nucleus of the Perineum; EAE, External Anal Sphinter; PR, Puborectalis; PV, Pubovaginal; IO, Internal Obturator; STP, Superficial Transverse Perineal;

Conclusions

- All patients included in this study reported pain in the pelvic floor muscles associated with trigger points evidenced in the physical examination compatible with myofascial pain
- The results of this case series study in these challenging patients with pelvic floor dysfunction were promising and encouraging, with an improvement in the self-assessment of refractory myofascial pelvic pain. They show that IncoBoNT-A injection into the pelvic floor could be an effective, well-tolerated and minimally invasive treatment in patients who have exhausted other treatment modalities. Further research has to be done to clearly elucidate the best indications and optimal dosing.

References

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