Persistent Genital Arousal Disorder (PGAD): Treatment by Neurolysis of Dorsal Branch of Pudendal Nerve

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ABSTRACT

INTRODUCTION

Persistent genital arousal disorder (PGAD) is the female perception that they are in a state of sexual arousal, without the ability of the arousal to be satisfied by orgasm. Diagnosis: It is the hypothesis of this study that PGAD results from a minimal degree of nerve compression of the dorsal branch of the pudendal nerve. If this hypothesis were true, then PGAD could be treated by neurolysis of the dorsal branch of the pudendal nerve. Methods: A retrospective chart review was carried out from 2010 through 2018, of those women having neurolysis of the dorsal branch of the pudendal nerve. Patients were included in the cohort if they had a diagnosis of PGAD. All patients were assessed for demographic and clinical differences. Comparison between the pre-operative and postoperative groups was performed with descriptive statistics. Main Outcome Measures: The changes in clitoral symptoms (arousal, numbness, pain) evaluated post-operatively.

RESULTS

Eight women included in this study, 7 were followed more than 24 weeks since surgery. Six of these women had the surgery bilaterally, and each of these had an excellent result (100%), meaning elimination of the arousal symptoms, pain, and the ability to resume normal sexual intercourse. The patient with unilateral decompression of the dorsal branch of the pudendal nerve had some improvement in arousal symptoms. This patient was the only reported case of symptom persistence. Clinical Implications: Provides a new treatment approach for patients with PGAD.

MATERIAL AND METHODS

Patient selection
Inclusion criteria were female patients (1) referred for PGAD of more than 52 weeks duration, who (2) had been treated already by their Gynecologists for all known medical causes of this disorder, who (3) have had already pelvic floor therapy, who (4) have had a trial of neuropathic pain and anti-seizure medication treatment, and who (5) had stopped all physical activity, such as cycling, that may be known to cause compression of the pudendal nerve.

Surgical technique
The patient is placed into lithotomy position, the perineal hairs are clipped and a betadine scrub and prep are done. Loupe magnification at 3.5X is utilized: A bipolar coagulator is used at the lowest possible voltage, especially when dissecting adjacent to the dorsal branch of the pudendal nerve at the inferior pubic ramus to avoid electrical injury to the nerve. The local anesthetic used is 3% Xylocaine injected into the incision site, which is located superior to the ischiatic tuberosity, and at an angle to the inferior pubic ramus, and lateral to the labia majora (Figure 1A).

The incision is opened into the ischiorectal fossa and maintained open with a Weitlander retractor with blunt “teeth.” Dissecting posteriorly and inferiorly, the perineal branches are identified, and preserved. In ten percent of patients the dorsal branch will exit through the canal of Alcock, and so this variant must be identified. If it is present, then the incision around the exit must be released, and this would complete the procedure. This has not proven to be the anatomic finding in any of the patients operated on in this series. After confirming that there is no dorsal pudendal branch exiting the canal of Alcock, the Weitlander retractor is placed into the most superior aspect of the incision. In this location, the ischiocavernous muscle is identified and its origin from the inferior pubic ramus is released using first the bipolar coagulation and then a sharp scissors. Care must be taken not to enter the corpora cavernosa to prevent venous bleeding. As the dissection approaches the juncture of the inferior pubic ramus with the symphysis pubis, a softer region is palpated, and spreading transversely with the scissors reveals a yellowish, almost faintly appearing 2 mm diameter dorsal branch of the pudendal nerve. Care must be taken not to injure electrically this little nerve. The nerve will be in slightly tight fascia as it travels more superficially to the base of the clitoris. The nerve will still likely be entrapped by scar more proximally. A small right angle clamp or dissector can be placed between the nerve and remaining intact fibers of the inferior pubic ramus canal to delineate this tight region prior to cauterying it and then sharply releasing it under direct vision while protecting the nerve (Figure 1B).

The site of compression can often be observed, being narrowed, and often inflamed compared to the regions proximal and distal to the compressed nerve (Figure 2,3, and 4). After checking for hemostasis, the wound is closed with interrupted, intradermal 4-0 monocryl, and the skin with interrupted and continuous 5-0 nylon sutures. The dressing is Xeroform, gauze, and small Tegaderm.

REFERENCES

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