I think the most interesting finding of this study, however, is that women randomized to the phenazopyridine group passed their trial of void on the day after surgery significantly more often. Twice as many women receiving phenazopyridine were able to void after surgery and be discharged home without a catheter than women in the control group. The potential significant cost savings of this should be further explored, particularly when the frequency of voiding dysfunction after pelvic reconstructive surgery approaches 50% in some trials. This means that the effect size of a 50% decrease in postoperative voiding dysfunction would be very significant and have a large impact on perioperative costs with return visits to the office, materials, and provider time. Furthermore, when many women in focus groups and studies looking at patient-centered outcomes identify concern about need for a urinary catheter after surgery as one of the highest priorities to patients, we could potentially see a huge impact on patient satisfaction with any intervention that minimized catheter need. I would like to see another study exploring whether this finding can be confirmed and the cost savings recognized as a result.—ACW

Adding Corticosteroids to the Pudendal Nerve block for Pudendal Neuralgia: A Randomised, Double-blind, Controlled Trial

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ABSTRACT

Management of pudendal neuralgia (PN) is often not evidence based. The practice of adding corticosteroids to a nerve block in patients with PN is widespread and largely based on a few studies suggesting that corticosteroids may prolong the effect of a local anesthetic. Previous studies investigating the effects of corticosteroid infiltration in PN had flaws in methodology and/or small sample sizes that limited conclusions.

The aim of this multicenter randomized, double-blind, controlled trial was to compare the effect of corticosteroids combined with local anesthetic with that of local anesthetic alone during infiltration of the pudendal nerve for pudendal nerve entrapment. The authors wanted to determine whether addition of corticosteroids to the anesthetic nerve block would improve the therapeutic result on pain. One hundred twenty-two women and 79 men were enrolled in the study. Infiltrations were guided by computed tomography scan with injection of contrast medium into the sacrospinous ligament and Alcock canal (obturator fascia).

The trial had 3 arms: patients in arm A (control group, n = 68) received local anesthetic alone; those in arm B (n = 66) received local anesthetic plus corticosteroid, and those in arm C (n = 67), local anesthetic plus corticosteroid with a large volume of normal saline. The primary study end point was reduction in pain intensity at 0 and 3 months after infiltration. The mean patient age was 57 years, and 61% were women; of these, 81% were postmenopausal. There was a history of pelvic surgery in 43% of patients (men and women). Patients were defined as responders who had at least a 30-point improvement on a 100-point visual analog scale of mean maximum pain over a 2-week period) or as nonresponders.

Three months after infiltration, 11.8% of patients in the control group (arm A) and 14.3% in the local anesthetic plus corticosteroid arms (arms B and C) were responders. The difference between groups was small in magnitude and not statistically significant.
significant ($P = 0.62$). In the female subgroup, there was no significant difference between arm A and arms B and C ($P = 0.09$). None of the parameters of PN—pain intensity and functional or quality-of-life criteria—were improved by the addition of corticosteroids.

These data show that corticosteroids do not provide any treatment benefit in addition to that of local anesthetics for pudendal nerve entrapment (PNE) and should no longer be used.

**EDITORIAL COMMENT**

(Pudendal neuralgia is a chronic pelvic pain syndrome characterized by a burning pain localized to the distribution of the pudendal nerve and tenderness over the course of the nerve. In practice, we can palpate the pudendal nerve during a vaginal examination medial to the ischial spine by pushing on the sacrospinous ligament. Pudendal nerve entrapment is an etiology of PN due to nerve immobilization and compression. The entrapment typically occurs in locations in which the nerve passes through fascial or ligamentous canals in the pelvis. Establishing a diagnosis of PNE requires that all 5 Nantes criteria be met (Labat et al. *Neurourol Urodyn* 2008;27:306–310). These include 3 pain symptoms (in the pudendal nerve distribution, worse when sitting, does not awaken patient), the absence of a sensory deficit on examination, and a minimum 50% reduction in pain while sitting after anesthetic nerve block. Pudendal nerve blocks often fail to anesthetize all branches of the nerve, making their use in diagnosis of PNE controversial (Antolak et al. *Pain Physician*. 2016;19(4):299–306).

The abstracted study randomized patients with suspected PNE who had not yet received their diagnostic local anesthetic injection to 1 of 3 groups: nerve injection with lidocaine alone, lidocaine + methylprednisolone, or lidocaine + methylprednisolone + hydrodissection with normal saline. The primary outcome was the percent reduction in pain intensity from baseline to 90 days after injection among the 82% of patients with successful injections (diagnostic for PNE). Only 26% of the patients with PNE experienced at least a 30% reduction in pain intensity, and only 36% considered their symptoms to be improved, with no statistically significant differences across the 3 randomized groups. The authors did not provide information on which other treatments the participants received during the intervening 3 months. An imbalance in these treatments between randomized groups could invalidate the authors’ conclusions. If one assumes the other treatments received were similar, the study results are both informative and humbling.

Corticosteroids are often injected with local anesthetics in nerve compression syndromes because they are thought to reduce nerve inflammation. The abstracted study’s findings support injection with local anesthetic alone and suggest that the nerve compression in PNE is not accompanied by a clinically significant inflammatory response. This finding will hopefully inform practice and decrease the use of corticosteroid injections in PNE. The lack of effective treatment alternatives is humbling. Medications for neuropathic pain, physical therapy, and generalized treatments for chronic pain (hypnosis, psychotherapy, transcutaneous nerve stimulation) may reduce the pain to a manageable level, but do not have clear evidence of effectiveness in placebo-controlled trials.

Patients seeking surgical decompression may find few centers worldwide that are experienced with the procedure, which is generally performed using a transgluteal approach. The complex route traversed by the pudendal nerve in the pelvis makes the surgery to localize the compression and release the nerve particularly ambitious. There is randomized trial evidence from the first center to establish the procedure in France supporting the long-term benefit of surgical decompression; 8 of 16 patients randomized to surgery remained improved at 4 years (Robert et al. *Eur Urol* 2005;47:403–408). Another center in Texas reported a 60% response rate 1 year after decompression surgery in 58 consecutive patients (Popeney et al. *Neurourol Urodyn*. 2007;26(6):820–827). Reproducibility in other centers has not been established. In light of the cost and limited number of centers providing decompression surgery, diagnostic injection with local anesthetic will likely remain an important tool for diagnosing PNE and identifying appropriate surgical candidates.—LAL)