

A Rare Case of Anorgasmia Following Epidural Steroid Injection— A Case Report

Maya M. Lach, BS, Michael A. Vaninetti, MD; Department of Anesthesiology and Pain Medicine; UC San Diego Health System

INTRODUCTION

- Epidural steroid injections (ESI) are widely used for conservative treatment of low back pain (LBP), the world’s leading disability with a lifetime prevalence between 51% and 84%.¹
- ESI offers pain relief, with common indications including disc herniation, spinal stenosis, and lumbar radiculopathy, making them especially beneficial in patients who have exhausted alternative methods or are deemed ineligible for surgical intervention.
- Reported adverse effects following ESI have an incidence rate of 4.8%, with symptoms including hiccups, facial flushing, urticaria and insomnia.²

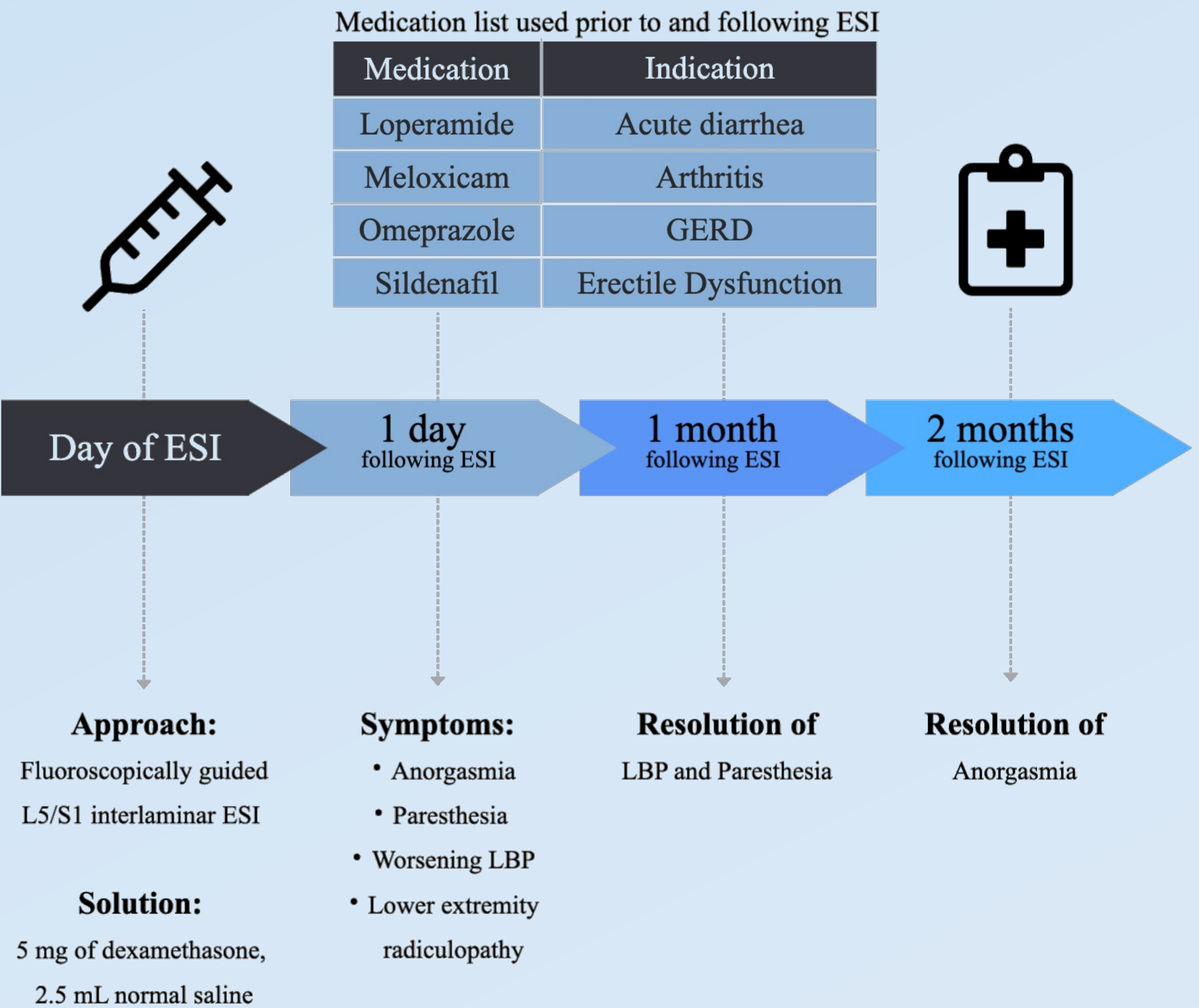
Purpose: The purpose of this case report is to introduce, to our knowledge, the first documented case of anorgasmia following an L5/S1 interlaminar epidural steroid injection.

MATERIALS AND METHODS

- **Location of Procedure:** Jennifer Moreno Department of Veterans Affairs Medical Center in San Diego, California
- **Data Collection:**
 - Telephonic patient interview was conducted following explicit consent
 - Patient informed consent was obtained for submission of this case report
- This case report was exempt from IRB review requirements as per VA and UC San Diego policy.
- No off-label indication or promotional content of commercial entity were included in this case report.

CASE REPORT

- 49-year-old male with chronic LBP and bilateral leg radiculopathy who presented for a lumbar ESI
- History of multiple epidural injections; significant relief with most recent injection one year prior with no adverse effects
- Past medical history includes well-controlled erectile dysfunction managed with sildenafil; no history of anorgasmia
- Surgical history includes two transurethral prostate incisions without post-operative sexual dysfunction
- **Procedure:** Patient treated with fluoroscopically guided L5/S1 interlaminar ESI using 0.5 mL of dexamethasone 10 mg/mL, for a total of 5 mg of dexamethasone, mixed with 2.5 mL normal saline
- The following day, patient developed anorgasmia, paresthesia from umbilicus to knees affecting the genitals, and worsening LBP with lower extremity radiculopathy
- Denied changes in libido or ability to maintain erection
- Symptoms persisted for 1 month; anorgasmia remained for 2 months followed by spontaneous resolution



DISCUSSION

- Anorgasmia, the persistent inability to achieve orgasm despite adequate sexual stimulation, is a poorly understood phenomenon with multifactorial etiologies. No relationship between ESI and anorgasmia has been reported. Potential hypotheses include:
- Systemic Effects on Hypothalamic-Pituitary-Gonadal (HPG) axis**
- ESIs have shown to be absorbed via epidural plexus resulting in systemic effects, serving as potential hypothesis for patient’s anorgasmia
 - Chronic glucocorticoid therapy reported to induce sexual dysfunction
 - Postulated mechanism involves glucocorticoid induced changes in the HPG axis
 - Glucocorticoids act on off-target receptors, namely GnRH-R, resulting in suppression of GnRH, LH, FSH, and testosterone levels³
- Local Effects on Sexual and Sensory Function**
- ESI injectate may be extravasated to neural structures, including the pudendal nerve, responsible for sensory, motor, and sympathetic innervation to perineum
 - Pudendal nerve innervation of erectile tissue involved in ejection phase of ejaculation⁴
 - Lumbar ESI diffusion to pudendal nerve could alter sexual function and genital afferents, leading to anorgasmia and paresthesia

Sexual Dysfunction Secondary to Pain Exacerbation

- Prior literature reports association between chronic back pain and sexual dysfunction⁵
- Patient experienced increased radicular pain following ESI, which may serve as a mechanism of anorgasmia

REFERENCES

1. James, S. L. *et al.* Global, regional, and national incidence, prevalence, and years lived with disability for 354 diseases and injuries for 195 countries and territories, 1990–2017: a systematic analysis for the Global Burden of Disease Study 2017. *The Lancet* **392**, 1789–1858 (2018).
2. Kang, W. Y. *et al.* Systemic effects of fluoroscopically guided epidural steroid injection with dexamethasone. *Korean J. Pain* **32**, 178–186 (2019).
3. Mahabadi, N., Doucet, A., Wong, A. L. & Mahabadi, V. Glucocorticoid Induced Hypothalamic-Pituitary Axis Alterations Associated with Hypogonadotropic Hypogonadism. **1**,.
4. Storlie, N. R. & Abbasi, H. Self-Reported Female Orgasm Following Serial Sacroiliac Joint Injections. *Cureus* **13**, e16737.
5. Labbé, E. E. Sexual Dysfunction in Chronic Back Pain Patients: Implications for Clinical Research and Practice. *Clin. J. Pain* **4**, 143 (1988).