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### The Benefits and Risks of Pudendal Nerve Block and Dorsal Root Ganglion Stimulation in Pudendal Neuralgia

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# The Benefits and Risks of Pudendal Nerve Block and Dorsal Root Ganglion Stimulation in Pudendal Neuralgia

## Background

- **Pudendal neuralgia** : a chronic and disabling neuropathic pain syndrome
  - worsening when sitting, urinating, during sexual intercourse <sup>6</sup>
  - may be relieved when standing or lying down
- Commonly misdiagnosed, improperly treated, and/or refractory to treatment <sup>7, 8</sup>
- Can lead to chronic pain and negative impact on quality of life <sup>8</sup>
  - Increased risk of depression and opioid abuse

## Significance

Currently there is a lack of research<sup>9</sup> evaluating proper diagnosis and interventional management (such as dorsal root ganglion stimulation and pudendal nerve block) of pudendal neuralgia. This further contributes to lack and delay of relief from chronic pain.

## Methods

Search Terms	Database	Results*
“pudendal neuralgia”	PubMed	297
“pudendal neuralgia dorsal root ganglion stimulation ”	PubMed	5
“pudendal neuralgia and pudendal nerve block”	Pubmed	85
“pudendal neuralgia and pudendal nerve block benefits ”	Pubmed	6
“pudendal neuralgia treatment ”	Pubmed	247

**Table 1:** Search Strings and Databases used.

### Inclusion/Exclusion Criteria

Articles that did not focus on either Pudendal Neuralgia or the use of interventional therapy such as Pudendal Nerve Blocks or Dorsal Root Ganglion Stimulation (DRGS) were excluded. Upon further restriction to articles focusing on the benefits of pudendal nerve blocks or the use of DRGS in patient population with pudendal neuralgia, only a total of only eight articles remained for analysis.

## Results

### Pudendal Nerve Block

#### BENEFITS

- Diagnostic and therapeutic tool for pudendal neuralgia due to pudendal nerve entrapment <sup>4</sup>
- Improves quality of life
- Simple and quick procedure <sup>2</sup>
  - performed in office or outpatient clinical settings
- Low risk <sup>5</sup>
- Cost effective <sup>5</sup>
  - done without image guidance or done with ultrasound/fluoroscopy
- Immediate effectiveness (5-20 minutes) <sup>5</sup>

#### DISADVANTAGES

- Failure of block
  - Anesthetic not given sufficient time
  - Poor technique due to lack of physician training <sup>10</sup>
    - Discomfort of injection site
    - Nearby structural injury (rare)
- Potential loss of efficacy after 2 years <sup>1</sup>
- Risk of bleeding or infection <sup>5</sup>
- Pudendal nerve damage (rare) <sup>5</sup>
- Risk of fatal local anesthetic toxicity (puncture artery) <sup>5</sup>
- High level of pain control and fewer systemic analgesic than neuraxial methods<sup>5</sup>
  - minimize risk of cardiopulmonary depression
- Response to pain not completely relieved <sup>5</sup>

### Dorsal Root Ganglion Stimulation

#### BENEFITS <sup>3</sup>

- Useful for patient unresponsive to conservative therapy and surgical management
- Relieves significant pain
- Improves quality of life

#### DISADVANTAGES <sup>3</sup>

- Infection at surgical site
- Hematoma
- Device failure
- Lacking research in safety and effectiveness

## Conclusion

- Though benefits and disadvantages of each of the treatments were assessed in the studies analyzed, there is no research directly comparing the two treatments.
  - Leading to a lack of current recommendations or guidelines based on treatment efficacies.
- Further research must be conducted on the use of DRGS for pudendal neuralgia as well as comparison study to effectively see its benefits and risks over pudendal nerve blocks

## Limitations

- Limited quantitative research on the use DRGS for pudendal neuralgia treatment
- Literature mainly focuses on use of pudendal nerve block and lacks comparison to dorsal root ganglion stimulation

## Future Directions

- Continue to search for literature regarding pudendal nerve blocks and DRGS
  - Search in additional databases
- Survey of patient reported outcomes
  - Provides a subjective outlook to establish proper treatment
- Extend focus to studies with combination therapies
  - non-interventional treatment with interventional modalities (pudendal nerve block and DRGS)
    - See if synergistic and improve overall symptom management

## Acknowledgements

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## References

