

Transcutaneous Electrical Nerve Stimulation for Acute Pain Management in Obstetrics & Gynecology: Applicability for IUD Insertion

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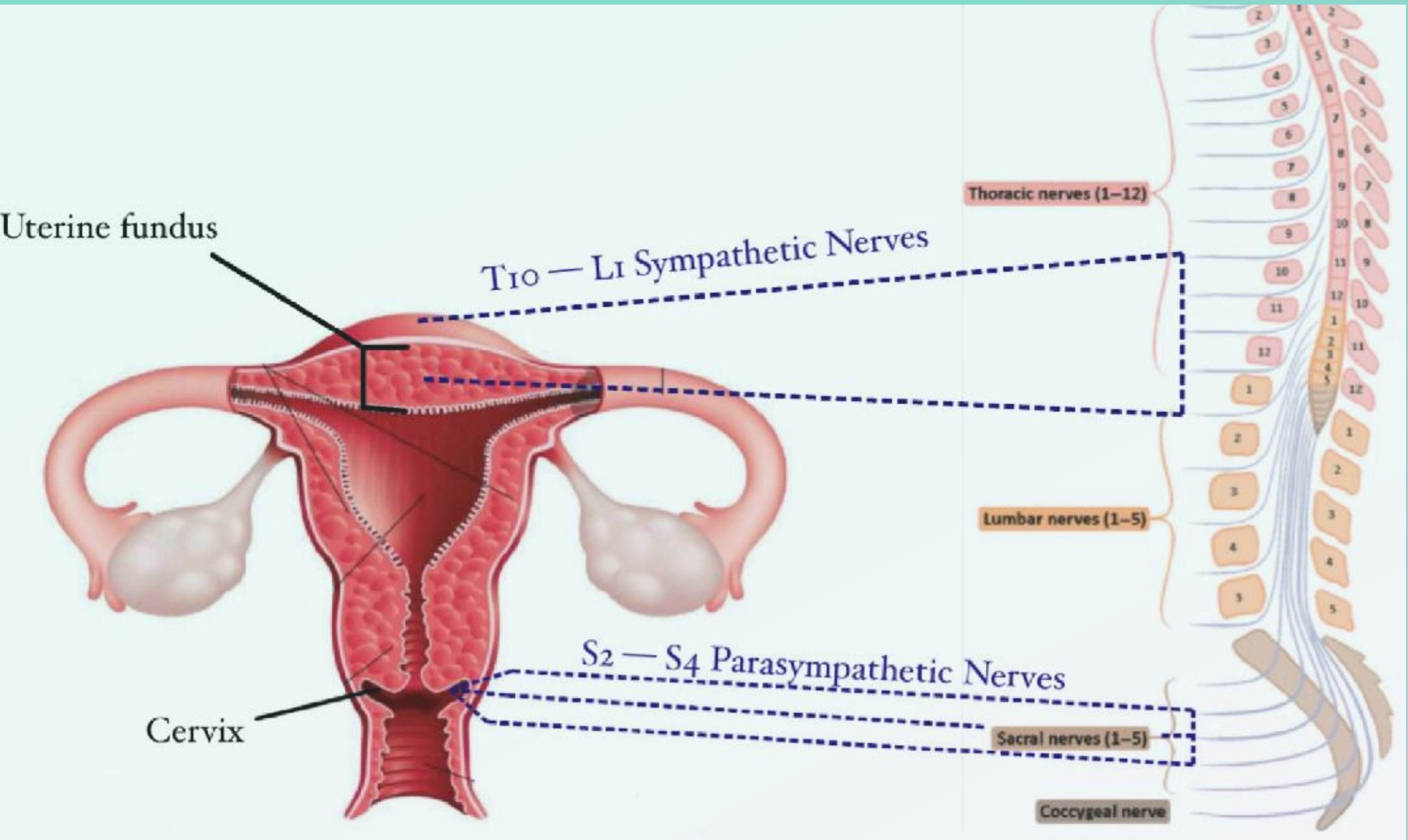
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Background

- Transcutaneous electrical nerve stimulation (TENS) therapy: a modality for pain control that utilizes electrical currents to target nerve stimulation within a specific area of the body.
- Electrical currents (frequency—dependent) stimulate mechanoreceptors on the skin, neurons of the dorsal column medial lemniscus (DCML) pathway, and inhibitory interneurons in the substantia gelatinosa (SG) which ultimately inhibit pain signals. Other theories suggest TENS utilizes a descending inhibitory pathway and increases endogenous opioids.
- In OBGYN, TENS has been shown to be effective at providing pain relief in patients with dysmenorrhea and chronic pelvic pain, as well as during vaginal delivery and C-sections.

Purpose

- Despite the efficacy, durability, and reversible nature of intrauterine devices (IUDs), many sexually active women are deterred from this form of birth control due the painful insertion process.



Discussion

- High-intensity TENS likely has better applicability for acute pain management since it activates gate control by stimulating A β fibers.
- No studies available for systematic review. However, recently published systematic review: *Efficacy of Transcutaneous Electrical Nerve Stimulation (TENS) for Management of Pain Associated With Hysteroscopy* showed that TENS is effective in reducing subjective pain perceptions in patients undergoing hysteroscopy.

Conclusion

- Currently, there is an ongoing clinical trial at the Icahn School of Medicine at Mount Sinai using high frequency TENS (*TENS for IUD Insertion Pain*).
- Additional RCTs and meta-analyses needed to explore the potential of TENS therapy in the realm of IUD insertion, as well as pain management in other minimally invasive procedures.

References

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