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Vidian neurectomy

- Commentary on: "Long-term outcomes of functional endoscopic sinus surgery with selective vidian neurectomy for chronic rhinosinusitis with nasal polyps combined with allergic rhinitis and asthma"
- Innovative surgical approaches for chronic rhinitis: nasal neurectomy mechanisms, techniques, and clinical outcomes
- Efficacy of Additional (Selective) Vidian Neurectomy in Treating Chronic Rhinosinusitis with Nasal Polyp: A Systematic Review and Meta-Analysis
- The Clinical Efficacy and Safety of Endoscopic Vidian-Branch Neurectomy in Intractable Allergic Rhinitis
- Long-term outcomes of functional endoscopic sinus surgery with selective vidian neurectomy for chronic rhinosinusitis with nasal polyps combined with allergic rhinitis and asthma
- Use of nasal mucosal autonomic nerve response in efficacy evaluation of vidian neurectomy for allergic rhinitis: a prospective study
- Efficacy of vidian neurectomy in treating chronic rhinosinusitis with nasal polyps combined with allergic rhinitis: A systematic review and meta-analysis
- Vidian Neurectomy

Vidian nerve Neurectomy is a surgical procedure that involves transecting or excising the vidian nerve to alleviate symptoms caused by excessive parasympathetic activity. This nerve, also known as the nerve of the pterygoid canal, carries parasympathetic and sympathetic fibers and is responsible for stimulating secretions in the nasal mucosa and lacrimal gland.

Initially described by Golding-Wood in 1961, diminishes autonomic supply to the nasal cavity and reduces nasal secretions ¹⁾

Indications

Vidian neurectomy is typically indicated for conditions characterized by excessive nasal secretions and chronic nasal symptoms, including:

Chronic Rhinitis:

Vasomotor rhinitis.

Allergic rhinitis (in cases refractory to medical therapy).

Refractory Rhinorrhea:

Persistent, excessive nasal discharge unresponsive to pharmacologic treatment.

Other Conditions:

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At times, considered for patients with Cluster Headaches or Paroxysmal Hemicrania, although this is less common.

Adjunctive management in CSF Rhinorrhea or Skull Base Tumors involving the vidian nerve pathway.

Procedure

Endoscopic Vidian Neurectomy

Complications

Dry Eye Syndrome: Due to interruption of parasympathetic innervation to the lacrimal gland.

Decreased Tear Production: May require artificial tears or other supportive care.

Facial Pain or Numbness: Rarely due to damage to nearby nerves.

Incomplete Symptom Relief: If other nasal pathologies are contributing.

Considerations

Patient Selection:

Vidian neurectomy is typically considered after failure of conservative treatments like antihistamines, intranasal corticosteroids, or anticholinergics.

Preoperative Testing:

Detailed imaging (CT or MRI) to assess the anatomy and ensure no contraindications.

Confirmation that symptoms are related to parasympathetic overactivity.

Postoperative Care:

Nasal irrigation to prevent crusting.

Management of dry eye symptoms if they occur.

Vidian neurectomy is a relatively specialized procedure, and its success depends on careful patient selection and surgical expertise. It is considered a last-resort therapy when medical management fails.

A case of honeymoon rhinitis consisting of a 48 years-old male patient with left unilateral nasal discharge mainly present during sexual intercourse and orgasm. Exploratory nasal endoscopy, CT and MRI were normal. Beta-trace test and all allergy tests were negative. The response to antihistamines and corticosteroids had been negative. A Vidian endoscopic neurectomy was carried out.

Using Vidian neurectomy, a complete sympathetic-parasympathetic denervation of the nasal mucosa

was achieved. After a follow-up of 15 days, the patient stated that his symptoms had improved. Nasal obstruction, sneezing, and rhinorrhea had decreased without showing symptoms either in the morning or during sexual intercourse. After two years of follow-up, the symptoms were still resolved without any complaints related to his preoperative "honeymoon rhinitis." Anatomical structural relationships between the activation of the autonomic nervous system in the pelvic region and the stimulation of sympathetic-parasympathetic neurons in the nasal mucosa is unknown. However, the use of Vidian neurectomy for treating these cases reveals they may be mediated by a possible disbalance of the autonomic activity.

This case report gives background on the autonomic innervation of the nasal mucosa and how its imbalance causes a clinical condition that we suggest it could be solved by the Vidian neurectomy when other therapeutic measures fail ²⁾.

This case report effectively highlights a rare presentation of rhinitis and demonstrates the potential role of Vidian neurectomy as a treatment for autonomic-driven nasal conditions. However, the findings are limited by the lack of pathophysiological clarity, single-case design, and absence of discussion on complications or alternative therapies. While the report opens new avenues for research and clinical application, robust evidence and a deeper understanding of autonomic pathways are needed before Vidian neurectomy can be widely recommended for such cases.

Zubair A, Hohman MH, Lasrado S. Vidian Neurectomy. 2024 Feb 24. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2024 Jan-. PMID: 33085289.

Massegur H, Carrera A, Gras-Cabrerizo JR, Tubbs RS, Reina F. Endoscopic Vidian neurectomy for treating postcoital unilateral hydrorhinorrhea: A case report and literature review. Int J Surg Case Rep. 2024 Dec 18;126:110749. doi: 10.1016/j.ijscr.2024.110749. Epub ahead of print. PMID: 39708722.

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