

# The prevalence of local allergic inflammation among patients with rhinitis: a systematic review

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## ABSTRACT

**Background:** Allergic rhinitis is defined as an IgE mediated inflammation of the nasal cavity. The diagnosis is based on the systemic test for allergy using either skin test or serology. Patients with negative results are diagnosed as non-allergic rhinitis. However, local nasal allergic response may differ from the systemic evaluation. **Objectives:** To evaluate prevalence of local allergic inflammation in the nose among patients diagnosed as allergic or non-allergic rhinitis. **Methods:** Embase (1947-2015) and Medline (1946-2015) were searched on the 9th December 2015 using a search strategy. The search was for studies on allergic and/or non-allergic rhinitis patients which included local nasal intervention. Studies were limited to English language and Human subjects. All studies that provided original data on local allergic inflammation in the nose among patients with rhinitis were included. Nasal allergic inflammation was assessed either by nasal provocation test (NPT) or sampling from the nasal cavity to test for nasal specific immunoglobulin E (sIgE), nasal eosinophils or other surrogate markers of allergy. **Results:** The search returned 4504 publications. After title review, 281 studies were selected for abstract screening. Of these, 217 full texts were reviewed. Included full texts gave data involving four types of nasal intervention: NPT (n=49), nasals IgE (n=37), nasal eosinophils (n=29) and other surrogate allergy markers (n=62). Some studies which used more than one intervention were duplicated. **Conclusion:** Systemic evaluation for allergy may not accurately reflect local nasal allergic inflammation. A simple yet accurate diagnostic test in the shock organ itself is needed to evaluate patients with rhinitis.

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# Efficacy of topical tranexamic acid to reduce bleeding in endoscopic sinus surgery for chronic rhinosinusitis with polyposis

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## ABSTRACT

**Objectives:** This study was conducted to evaluate the effect of topical tranexamic acid (TXA) on bleeding and surgery site quality during endoscopic sinus surgery. **Methods:** This trial was conducted on 30 patients with chronic sinusitis with polyposis. The two nostrils of thirty patients were randomly assigned into one nostril as intervention and contralateral as control. The intervention nostril received pledgets soaked with TXA 5% and cocaine 10% for 15 minutes before surgery, the control nostril received pledgets soaked with cocaine 10% and 1cc adrenaline 1:1000. The bleeding in surgical field were evaluated at the start and at the end of surgery using Boezaart grading by the surgeon blinded to the assignment. At the end, intervention nostril was packed with merocel soaked with TXA 5% and control nostril was packed with merocel soaked with normal saline. The amount of bleeding within 24-hour post-operation were evaluated. **Results:** There is no difference in surgical field bleeding with median of Boezaart score between intervention and control group (median score [3.00(IQR 2.00-3.75) vs 3.00(IQR 2.00-3.00),  $z=-0.30$ ,  $p=0.762$ ]). However, the amount of bleeding in the postoperative period was much less in the intervention group compared to the control group ( $p=0.037$ ). **Conclusions:** Topical TXA can reduce postoperative bleeding and it also can be used as an alternative to reduce bleeding and improve the surgical field in FESS in patients with rhinosinusitis with polyposis.