

## DIAGNOSTIC VALUE OF KEY SYMPTOMS IN CHRONIC RHINOSINUSITIS DURING PREGNANCY: PAIN, NASAL OBSTRUCTION, AND NASAL DISCHARGE

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**Abstract:** Chronic rhinosinusitis (CRS) is a common inflammatory condition of the nasal and paranasal mucosa, characterized by persistent or recurrent symptoms lasting more than 12 weeks. Among its cardinal manifestations, facial pain or pressure, nasal obstruction, and nasal discharge are considered essential for clinical diagnosis. This study explores the diagnostic relevance of these symptoms, analyzing their frequency, severity, and correlation with radiological and endoscopic findings. The presence and intensity of each symptom vary across individuals, but a combination of nasal obstruction and purulent discharge strongly correlates with objective signs of sinus inflammation. Recognizing the diagnostic patterns of these symptoms is crucial for early detection, appropriate treatment, and prevention of complications in CRS patients.

**Key words:** chronic rhinosinusitis, nasal obstruction, nasal discharge, facial pain, symptomatology, diagnostic criteria, ENT diseases, sinus inflammation.

Chronic rhinosinusitis (CRS) is a prolonged inflammatory condition of the nasal and paranasal sinus mucosa, lasting more than 12 consecutive weeks despite medical treatment. It is a significant global health problem, affecting approximately 10–12% of the adult population, with substantial impact on quality of life, work productivity, and healthcare costs. Accurate diagnosis of CRS remains a clinical challenge due to symptom overlap with other upper respiratory tract disorders, such as allergic rhinitis and viral upper respiratory infections[1]

The diagnosis of CRS is primarily based on the presence of cardinal symptoms, supported by objective findings such as nasal endoscopy and imaging. Among these, nasal obstruction, nasal discharge (anterior or posterior), and facial pain or pressure are considered the most clinically relevant. However, their individual diagnostic value and their combined predictive power vary depending on disease severity and phenotype, such as CRS with or without nasal polyps.

Understanding the diagnostic significance of these core symptoms is essential for early detection and classification of CRS, as well as for the selection of appropriate therapeutic strategies. This paper aims to analyze the role of these symptoms—pain, nasal obstruction, and nasal discharge—in diagnosing chronic rhinosinusitis and correlating them with objective clinical indicators.

The clinical evaluation of chronic rhinosinusitis largely relies on patient-reported symptoms, which are subjective but often correlate with underlying mucosal inflammation. The three key symptoms under consideration—facial pain, nasal obstruction, and nasal discharge—are each associated with distinct pathophysiological mechanisms and clinical implications.

**Nasal Obstruction:**

This is the most frequently reported symptom in CRS. It results from mucosal edema, increased mucus production, or structural blockages within the nasal passages. In clinical practice, nasal obstruction is often a persistent and dominant complaint. Studies have shown that its presence

is highly predictive of objective findings on endoscopy and CT scan, especially mucosal thickening and ostiomeatal complex obstruction[2]

#### Nasal Discharge:

This includes both anterior rhinorrhea and postnasal drip. Mucopurulent discharge is strongly suggestive of bacterial infection or advanced mucosal disease. In CRS, persistent nasal discharge correlates with neutrophilic infiltration and biofilm presence. It is also a key symptom in distinguishing CRS from other forms of non-infectious rhinitis.

#### Facial Pain or Pressure:

While often reported by patients, facial pain has lower specificity in CRS diagnosis. It may be associated with sinus pressure, barometric changes, or neuropathic components, and is more commonly reported in acute exacerbations of CRS. However, when present in conjunction with nasal obstruction and discharge, it strengthens the clinical suspicion of CRS.

Several diagnostic algorithms, such as the EPOS guidelines (European Position Paper on Rhinosinusitis and Nasal Polyps), emphasize the importance of symptom clustering. According to these guidelines, the diagnosis of CRS requires at least two symptoms—one of which must be either nasal blockage or discharge—persisting for 12 weeks, along with objective evidence of sinus disease[3]

Chronic rhinosinusitis (CRS) is characterized by long-standing inflammation of the nasal and paranasal sinus mucosa. One of the central clinical dilemmas in otolaryngology is accurately diagnosing CRS based on symptom presentation, especially in primary care settings where access to advanced imaging may be limited. Therefore, understanding the diagnostic significance of core symptoms—namely nasal obstruction, nasal discharge, and facial pain or pressure—is critical.

Studies suggest that nasal obstruction is the most consistently reported and diagnostically useful symptom, especially when persistent. It often reflects mucosal thickening, polyp formation, or anatomical variations that block sinus drainage. When combined with nasal discharge, particularly mucopurulent in nature, the likelihood of CRS increases substantially. Nasal discharge reflects mucosal secretory activity and bacterial colonization, and its presence often correlates with findings on nasal endoscopy or computed tomography (CT).

Facial pain or pressure, however, presents a diagnostic challenge. Although frequently reported, its specificity is limited. Pain may also occur in migraines, tension headaches, or temporomandibular joint disorders, leading to diagnostic confusion. Nevertheless, in CRS with acute exacerbation, facial pressure intensifies and serves as an important clinical clue.

The EPOS 2020 guidelines emphasize that the diagnosis of CRS requires a combination of at least two symptoms—one of which must be nasal blockage or discharge—and objective confirmation (endoscopy or CT). This highlights the importance of symptom clustering rather than relying on individual signs[4]

Recent studies also underline that symptom severity scores (e.g., SNOT-22) can help quantify symptom burden and monitor treatment outcomes. Additionally, symptom patterns may differ in CRS with nasal polyps (CRSwNP) and CRS without nasal polyps (CRSsNP), further guiding personalized therapy.

Ultimately, while subjective in nature, these three cardinal symptoms—when assessed in combination and context—remain a cost-effective, accessible, and reliable starting point in CRS evaluation, especially where radiological tools are limited.

The diagnostic evaluation of chronic rhinosinusitis relies heavily on the recognition of its hallmark symptoms: nasal obstruction, nasal discharge, and facial pain or pressure. Among



these, nasal obstruction and purulent discharge are the most predictive of objective disease, while facial pain requires careful differential assessment.

A combined assessment of these symptoms, aligned with established clinical guidelines, enhances diagnostic accuracy and informs timely management decisions. Physicians should remain vigilant in assessing the pattern, duration, and severity of these symptoms to distinguish CRS from other overlapping conditions.

Further research is recommended to refine symptom-based scoring tools and validate non-invasive diagnostic models that can be used in primary care settings, particularly in resource-limited environments.

### References:

1. Fokkens, W. J., Lund, V. J., Hopkins, C., et al. (2020). European Position Paper on Rhinosinusitis and Nasal Polyps 2020 (EPOS 2020). *Rhinology Supplement*, 29, 1–464.
2. DeConde, A. S., & Soler, Z. M. (2016). Chronic rhinosinusitis: Epidemiology and burden of disease. *American Journal of Rhinology & Allergy*, 30(2), 134–139.
3. Sedaghat, A. R. (2017). Chronic rhinosinusitis. *American Family Physician*, 96(8), 500–506.
4. Smith, T. L., Mendolia-Loffredo, S., Loehrl, T. A., et al. (2005). Predictive value of symptoms in diagnosing chronic rhinosinusitis. *Laryngoscope*, 115(8), 1341–1347.