

Acute Exacerbation of Chronic Rhinosinusitis in Adults

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As we move through the winter season, many of our patients with chronic rhinosinusitis (CRS) become more susceptible to acute exacerbation of their CRS. (AECRS) This article highlights the key features of AECRS and the latest evidence to support our patients during this time.

What is an Acute Exacerbation of Chronic Rhinosinusitis in Adults?

It is an extension of the definition CRS:

- CRS: (with or without nasal polyps) in adults is defined as:
Presence of 2 of more symptoms for ≥ 12 weeks

One of which should be:

1. Nasal blockage/obstruction/congestion or nasal discharge (posterior or anterior nasal drip)
 2. +/- facial pain or pressure
 3. +/- reduction or loss of smell
- Acute Exacerbation of Chronic Rhinosinusitis (AECRS) is defined as:
A sudden worsening of any of the CRS criteria, including nasal congestion, or obstruction, or increasing facial pain or pressure with return to baseline CRS symptom intensity, often after intervention with corticosteroids and/or antibiotics
 - Aetiology:
 - Unclear and multifactorial
 - Lack of bacterial airway pathogens identified
 - Many patients have had previous sinus surgery thus create a new microbial environment and other pathogens possibly elicit a host inflammatory response
 - Viral infections: more likely the cause especially with increasing evidence that rhinovirus infection can drive eosinophilic inflammation
 - A focus on prevention and management of viral infections may be more effective than treating secondary infections with antibiotics and eosinophilic flare ups with corticosteroids. 2

Management

- No evidence-based treatment recommendations for AECRS currently exist.
- Consensus guidelines and expert opinion recommend short-term antibiotics for AECRS, in the setting of a positive culture to provide symptomatic relief.^{1,2}
- The pre-existing inflammatory component of CRS, and the role it plays in the acute exacerbation is not well understood.
- The treatment for AECRS with the implementation of antibiotics has been extrapolated and applied to AECRS, despite AECRS being recognized as a distinct entity of CRS.^{3,4}
- Antibiotics and treatment of the pre-existing CRS are often implemented.
- Non-randomized studies have been reported in the literature. However, it is difficult to draw meaningful conclusions due to the heterogeneous nature of the studies, the adoption of diverse definition criteria of AECRS, the different clinical endpoints documented, and the small sample size.

What can we offer our patients when they have an Acute exacerbation of Chronic Rhinosinusitis?

Systemic corticosteroids: do play a role in the treatment of facial pain – with a small but significant effect versus placebo on facial pain at days 4-7

Nasal corticosteroids: are has a small effect in reducing total symptom score for patients There is no effect on quality of life scores.

Nasal decongestant: may be effective in improving mucociliary clearance throughout the acute phase of the disease however care must be taken to educate the patient to not use for more than 3-5 days to prevent rhinitis medicamentosa.

Culture directed antibiotics: to date remains an unknown entity and until

further high-quality studies are available, I would recommend treating patients with culture directed antibiotics despite there being a lack of evidence in quality of life and endoscopy scores.

In summary:

The pre-existing inflammatory component of CRS, and the role it plays in the acute exacerbation is not well understood. Further high-quality studies are needed in this area. ■



Photo of an Endoscopic view demonstrating AECRS

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