

ACUTE RADIOLOGY RARELY CONFIRMS SINUS DISEASE IN SUSPECTED RECURRENT ACUTE RHINOSINUSITIS

Alexander S. Zhang^{1,2}, Henry P. Barham^{1,3}, Jenna M. Christensen^{1,2}, Raymond Sacks^{1,4,5}, Richard J. Harvey^{1,2,4}

1. *Rhinology and Skull Base Research Group, St Vincent's Centre for Applied Medical Research, University of New South Wales, Sydney, Australia*
2. *St Vincent's Centre for Applied Medical Research, University of New South Wales, Sydney, Australia*
3. *Department of Otolaryngology Head and Neck Surgery, Louisiana State University, New Orleans, Louisiana, USA*
4. *Australian School of Advanced Medicine, Macquarie University, Sydney, Australia*
5. *University of Sydney, Sydney, Australia*

Introduction: Episodic or recurrent sinonasal symptoms are often suspected as 'sinus' in origin. With normal sinus radiology between events, the diagnosis of recurrent acute rhinosinusitis (RecARS) is made. However, other conditions can produce episodic symptoms such as rhinitis and migraine. This study analyses acutely performed computed tomography (CT) in a population with suspected or self-diagnosed 'sinus' disease.

Methods: Patients referred to a tertiary clinic for suspected RecARS were assessed. Sinus changes were defined by CT (initial assessment) and during the acute event, by a semi-urgent CT performed during the symptomatic episode. Mucosal thickening, ostiometal compromise and severe septal deformity were recorded. Symptom profile was assessed during both time points with the sino-nasal outcome test 22 (SNOT22).

Results: Forty-eight patients (49.5 ± 14.7 years, 70.8% female) were assessed. At presentation, 75% were resolute in a diagnosis of 'sinus'. Baseline Lund-Mackay scores were all less than 6 (median 0 (IQR 1)). Ostiomeatal compromise was 6.8% left and 4.5% right at baseline. Of the patients that returned for acute CT ($n = 26$), SNOT-22 and subdomains were similar to baseline. Septal deviation was similar (13.6% v 15.3%). Acutely, ostiomeatal compromise was 0% left and 7.4% ($n = 2$) right. Of these two patients with ostiomeatal compromise, one was diagnosed with RecARS (4%) and the other with triptan-responsive migraine, with incidental sinus changes. Final diagnosis was rhinitis (47%), headache/migraine (37%) and facial pain otherwise undefined (12.5%).

Conclusions: Most patients with episodic 'sinus' disease have rhinitis or migraine as their diagnosis. RecARS is an uncommon event even in patients steadfast in their beliefs.