

## Letter to the Editor

*Sinusitis as Potential Risk Factor for Stroke—Relationship to Underlying Periodontitis*

Dear Editor/s,

The chief merit of the meta-analysis<sup>1</sup> is to alert the fields of medical and dental sciences (separated as they are by a systemic gulf) that sinusitis is somehow linked to stroke. My group's work, one of the included studies, suggests sinusitis and stroke may arise in parallel from proximate periodontitis, the "a priori" hypothesis proposing links of incidental sinusitis to atherosclerosis. Crucially, our study reproduced a key quirk from periodontal research that periodontitis links are stronger for stroke than for coronary artery disease. The meta-analysis authors noted the proximity of the sphenoid sinuses to the internal carotid arteries as a plausible causal pathway, while entirely missing that the proximity of gums-to-sinuses is both larger and closer. (They also missed a clue to this in the other included magnetic resonance imaging study, showing 3 times more maxillary than sphenoid sinus involvement in stroke patients.)

The chief critique of the Review is that it was clearly not "Systematic." The omissions include (1) no mention

of periodontitis (The best evidence linking periodontitis to atherosclerosis is detection of DNA products from periodontal pathogens in atheromatous plaque, suggesting an occult transit mechanism for cellular debris/pathogens originating from deep periodontal pockets.); and (2) missing that our research replicated the stronger link for stroke over coronary artery disease. Your reviewers only needed to catch 1, with only 5 included studies to review. Note that these facts ramify to publication ethics.

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### Reference

1. Wattanachayakul P, Rujirachun P, Ungprasert P. Risk of stroke among patients with chronic rhinosinusitis: a systematic review and meta-analysis. *J Stroke Cerebrovasc Dis* 2019. <https://doi.org/10.1016/j.jstrokecerebrovasdis.2019.01.002>. pii: S1052-3057(19)30002-3.

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