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A pseudoaneurysm of the internal carotid artery in the sphenoid sinus causing epistaxis

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A 65-year-old male presented to a regional hospital with an 8-day history of recurrent epistaxis. Computed tomography showed sinus disease (Figure 1) that was misdiagnosed as a tumour and sinus surgery was performed. During the operation, a pulsatile mass was found in the left sphenoid sinus and the patient was immediately transferred to the authors' hospital. Emergency computed tomography angiography revealed a pseudoaneurysm in the left internal carotid artery that had burst into the sphenoid sinus (Figure 2). A covered stent was deployed to exclude the lesion and preserve the internal carotid artery. The bleeding events resolved without any neurological deficits.

Figure 1. Axial computed tomography scan showed soft tissue density in the left sphenoid sinus, which could easily be misdiagnosed as sinusitis or tumour.

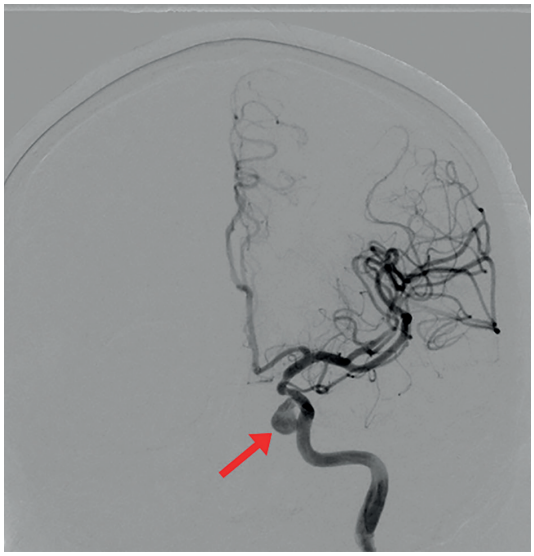

Figure 2. Digital subtraction angiography confirmed a pseudoaneurysm in the C5 segment of the left internal carotid artery (arrow).

Epistaxis is a common emergency, but epistaxis caused by a pseudoaneurysm is uncommon and usually fatal. Physicians should consider this diagnosis when confronted with massive or recurrent epistaxis. Computed tomography angiography is worth considering when computed tomography shows soft tissue or cystic lesions in the sinuses (Deng et al, 2019).

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Reference

Deng D, Du J, Liu F et al. Clinical characteristics of internal carotid artery pseudoaneurysms in the sphenoid sinus. Am J Otolaryngol. 2019;40(1):106–109. https://doi.org/10.1016/j.amjoto.2018.09.014