

## Sinus headaches

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The issue of whether headaches and, or facial pain or pressure are caused by sinusitis has caused much debate in the literature. Many patients believe sinusitis is a cause of their pain, a view often reinforced by their General Practitioners or other hospital physicians.

The paper in this issue by Phillips et al. <sup>(1)</sup> (page 14) describes the role of endoscopic sinus surgery for 'sinus headaches' in patients with genuine chronic rhinosinusitis on the basis of sinonasal symptoms with positive finding at endoscopy and computerised tomography who are resistant to maximal medical treatment. The authors conclude that endoscopic sinus surgery results in a statistically significant improvement in headache symptom scores at three months and one year post surgery. They also conclude from their subgroup analysis that the intraoperative findings of pus of nasal polyposis were not associated with an improvement in headache symptom scores.

There are a few issues we would like to highlight. The perceived benefit shown in this paper in symptom scores is small (by one point on a 5 point scale). Furthermore, 40% of patients continued to have headache despite endoscopic sinus surgery. The authors have not commented on whether any attempt was made to identify and treat neurological causes of headache or facial pain in the cohort of patients prior to undertaking surgery. This is particularly important if these are the patients' primary symptoms.

From their subgroup analysis of patients with and without nasal polyposis, and those with and without pus intra-operatively, the authors found no significant differences between the pre-operative and twelve months symptom scores for headache. These findings are not surprising as most patients with nasal polyposis do not have pain. Twelve percent of patients have been shown to have pain secondary to co-existing rhinosinusitis rising to 25% for those who have purulent disease <sup>(2)</sup>.

There is no doubt that in patients with facial pain who have genuine chronic infective rhinosinusitis, based on the presence of sinonasal symptoms, positive findings at endoscopic examination and radiological evidence of disease, between 75-83% will be helped by surgery <sup>(3,4)</sup>. Mehanna et al reported on headache and facial pain using a validated outcome score. They found an improvement in facial pain and a greater improvement for headache after surgery <sup>(5)</sup>. However if these symptoms are primary symptoms then we would advise caution against surgery initially and a neurologic cause should be sought. A recent article on the management of sinogenic facial pain advises using "significant caution when considering surgery in those patient (with facial pain) because of high long-term failure rates and the eventual identification of other causes of the pain in many cases" <sup>(6)</sup>.

Some specialists have advocated endoscopic sinus surgery for facial pain in the absence of endoscopic or CT evidence of sinus disease <sup>(7,8)</sup>. A proportion of patients experience a temporary relief from their symptoms, although the pain returns, usually within a few weeks and nearly always within 9 months. It is hypothesised that the temporary or partial reduction in their pain results from the effect of cognitive dissonance <sup>(9)</sup> or from the effect of surgical trauma on the afferent fibres going to the trigeminal nucleus, which alters the threshold for spontaneous activity in the short term. In some patients, surgery does not significantly affect the pain, and in a third category of patients, the pain is made far worse after surgery and may develop a more unpleasant quality, such as burning <sup>(10-12)</sup>. Patients whose pain is increased by surgery are subsequently particularly difficult to manage with medical treatment.

Therefore, a careful history is central in establishing a correct diagnosis. If pain and pressure is the primary symptom it is unlikely to be due to sinus disease in the absence of any nasal symptoms or signs. In these patients other neurological causes such as midfacial segment pain <sup>(13)</sup>, atypical forms of migraine <sup>(14)</sup>, cluster headache <sup>(15)</sup>, paroxysmal hemicrania <sup>(16)</sup> and atypical facial pain <sup>(3)</sup> should be sought.

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