A brief overview on chronic facial pain in rhinology practice

BY ADRIAN M AGIUS

Chronic facial pain is a common yet complex issue in rhinology, often neurologic in origin and frequently misattributed to sinus disease.

Facial pain is a very common complaint in the rhinology clinic. In a community-based ENT practice where patient symptoms were recorded prospectively on a standard database, one fourth (25%) of 10,000 patients attending with rhinological disorders presented with a principal complaint of facial pain or admitted to it on questioning [1]. A similar proportion of patients with allergic rhinitis were also recorded to have facial pain [2]. In patients presenting with facial pain as their principal complaint, their endoscopy and CT scan was generally normal or near normal [3–7]. These patients are difficult to follow up as they tend to move back and forth between their GP and various specialist doctors in search of treatment that provides relief, and their continuity of care is limited. Chronic facial pain is defined as having more than 15 pain days a month for at least three months. The prevalence of chronic facial pain and headache in the community has been estimated at 4% [5]. This means that rhinologists see a large share of patients with facial pain which, at 25%, constitutes a significant proportion of their workload.

Typically, patients are female between 35 and 55 years of age [6]. Only 25% of patients with chronic facial pain are men. Usually patients have had their facial pain for several years before presentation and have visited an average of four other doctors for the same reason before the current consultation [7, 8]. All of these cases are challenging as patients have high expectations that something will be 'done' for them. Although we now know that the great majority of such individuals have pain of neurologic and not sinogenic origin, the anatomical proximity of the sinuses to the pain and an ingrained tendency to blame the sinuses for their facial pain puts a great deal of pressure on the otorhinolaryngologist to provide a surgical answer to their problem. Until a few years ago, little was known about the appropriate treatment or the long-term prognosis for these patients.

> "Patients have high expectations that something will be 'done' for them"

Agius et al carried out a randomised controlled trial that showed the efficacy of low-dose amitriptyline in treating this condition, with significant reduction in pain frequency and severity [9]. Amitriptyline has the advantage of being cheap and readily available, with minimal side effects at a dose of 10 mg daily.

In the community setting, the diagnosis for most patients with chronic facial pain is that of tension-type pain which is commonly associated with frontal headache. The features here are a bilateral pain of pressing quality that is mild to moderate and lasts all day, does not respond to paracetamol but does sometimes respond to non-steroidal anti-inflammatories. The pain is commonly perceived in the nasion region but may be paranasal, periorbital, retro-orbital or involve the cheeks. There is no associated photophobia or vomiting. This pain is not as severe as in facial migraine. Professor Nick Jones (Nottingham) has coined the term 'midfacial pain' (MFP) to better describe this clinical entity [10].

> "The great majority of such individuals have pain of neurologic and not sinogenic origin"

Patients with facial migraine, the second-most common cause of facial pain, complain of moderate to severe throbbing, aching or pulsating periorbital pain on one side and involving the temporal or frontal region. The pain can last up to three days and is accompanied by photophobia and nausea or vomiting. An aura is present in 25% of patients, typically manifesting as visual disturbances or numbness, and its presence helps with the diagnosis. Usually a close family member suffers from migraines. In both tension-type pain and facial migraine, pain is often precipitated by change of weather, stress

and menstruation [11]. Studies carried out in tertiary centres may report a larger proportion of facial migraine compared to MFP in their case series since tension-type pain is milder and such individuals may not warrant referral.

Facial migraine also responds very well to low-dose amitriptyline, except that the pain pattern tends to recur more rapidly after a standard eight-week course [6].

Long term follow-up has determined that in half of patients with MFP, their pain resolves spontaneously within three years while, in a third, their pain becomes episodic with significant decrease in pain frequency [6]. Patients with facial migraine are significantly more likely to continue with chronic pain although, in a third, their pain changes from chronic to episodic with significant reduction in frequency when followed up for three years [6].

Conclusion

Improvement of clinical skills in the diagnosis and treatment of chronic facial pain would be beneficial to the clinician who has to invest an appreciable amount of time during the consultation to help these patients. History taking is an important diagnostic tool well within the scope of an otorhinolaryngologist. This field sees ENT specialists collaborate with neurology to benefit patients and holds significant potential to improve their quality of life.

References

1. Agius AM, unpublished audit data, 2018.
2. Agius AM, Cordina M, Calleja N. The role of atopy in Maltese patients with chronic rhinitis. *Clin Otolaryngol* 2004;**29(3)**:247–53.
3. Agius AM. Long-term followup of patients with facial pain in chronic rhinosinusitis-correlation with nasal endoscopy and CT. *Rhinology* 2010;**48(1)**:65–70.
4. West B, Jones NS. Endoscopy-negative, computed tomography-negative facial pain in a nasal clinic. *Laryngoscope* 2001;**111(4Pt1)**:581–6.
5. Scher AI, Stewart WF, Liberman J, Lipton RB. Prevalence of frequent headache in a population sample. *Headache* 1998;**38(7)**:497–506.
6. Agius AM, Jones NS, Muscat R. Prospective three-year follow up of a cohort study of 240 patients with chronic facial pain. *J Laryngol Otol* 2014;**128(6)**:518–26.
7. Jones NS. Midfacial Segment Pain: Implications for rhinitis and rhinosinusitis. *Clin Allergy Immunol* 2007;**19**:323–33.
8. Eross E, Dodick D, Eross M. The sinus allergy and migraine study (SAMS). *Headache* 2007;**47(2)**:213–24.
9. Agius AM, Jones NS, Muscat R. A Randomized Controlled Trial comparing the efficacy of low-dose amitriptyline, amitriptyline with pindolol and surrogate placebo in the treatment of chronic tension-type facial pain. *Rhinology* 2013;**51(2)**:143–53.
10. Jone NS. Midfacial Segment Pain: implications for rhinitis and sinusitis. *Curr All Asthma Rep* 2004;**4(3)**:187–92.
11. Ramussen BK. Migraine and tension-type headache in a general population: precipitating factors, female hormones, sleep pattern and relation to lifestyle. *Pain* 1993;**53(1)**:65–72.

> “Rhinologists see a large share of patients with facial pain which, at 25%, constitutes a significant proportion of their workload”

AUTHOR

Professor Adrian M Agius, MD, PhD, FRCS (Ed), M Med Sc(BHam), FEBEORLHSN (Hons),

Associate Professor, Dept of Otorhinolaryngology, University of Malta, Msida, Malta.

Declaration of competing interests:
None declared.