

The management of chronic rhinosinusitis in primary care:

an evidence-based guide

BACKGROUND AND DEFINITIONS

Presentations to general practice with the myriad of symptoms associated with chronic rhinosinusitis (CRS) are extremely common. The mainstay of management of this condition is carried out in primary care.¹ This article covers the diagnosis and management of adult CRS in the light of evidence from the European position paper from 2012 on this condition.²

CRS is reported to affect 5–15% of the general population but only 2–4% of this is diagnosed by a doctor.³ Awareness of the relevant definitions will aid diagnosis and management of this common, but underdiagnosed, condition.

Adult rhinosinusitis is defined as:

*'Inflammation of the nose and paranasal sinuses characterised by two or more of the following symptoms.'*²

At least one of these must be:

- nasal blockage; or
- nasal discharge (including postnasal drip).

Other 'non-essential' symptoms that contribute to diagnosis include:

- facial pain/pressure; or
- reduction or loss of sense of smell.

Continuation of symptoms for >12 weeks differentiates chronic from acute rhinosinusitis.¹

This definition can be refined with the aid of flexible nasendoscopy. This can help subdivide patients with CRS into two groups: those with and without nasal polyps.²

HISTORY

Patients with CRS may present to general practice with a wide array of symptoms.¹ Along with those identified above there are a range of symptoms including:^{3,4}

- persistent cough/throat clearing;
- headache;
- dysphonia (change in quality of voice); and
- drowsiness/malaise.

The use of symptom severity scales, such as the visual analogue scale (VAS) has been suggested.^{2,3} Markers to grade the severity are mild (0–3), moderate (3–7), and severe (7–10).³ This is a particularly useful tool in primary care to help gauge response to treatment and assess need for onward referral.

Questioning on timing of symptoms (that is, perennial or seasonal) and allergic symptoms (sneezing, watery rhinorrhoea, itching, and watery eyes) also aids the identification of allergic rhinitis as an alternative or concurrent diagnosis. If this is suspected, allergy testing can be undertaken in the form of skin-prick tests or serum-specific IgE levels depending on the local department. These tests are commonly undertaken in secondary care, but if allergic rhinitis is suspected as a sole diagnosis in primary care these could be arranged to aid management.

There are multiple associations with CRS. The most well recognised of these is the association with asthma due to the shared respiratory epithelium. This is a useful comparison for some patients to help reinforce the treatment of this as a chronic condition. Conditions that affect ciliary function are also frequently associated (for example, Kartagener syndrome and cystic fibrosis).

EXAMINATION

Full examination of the nose and paranasal sinuses relies on the use of nasendoscopy. However, when undertaking anterior rhinoscopy, in primary care, the clinician can get an appreciation of the nasal mucosa (that is, hyperaemic, congested, or dry), assess for any discharge (clear or mucopurulent), and identify visible polyps.¹ This can also often rule out alternative diagnoses, such as,

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REFERENCES

1. Thomas M, Yawn BP, Price D, *et al.*; European Position Paper on Rhinosinusitis and Nasal Polyps Group. EPOS primary care guidelines: European position paper on the primary care diagnosis and management of rhinosinusitis and nasal polyps 2007 — a summary. *Prim Care Respir J* 2008; **17**(2): 79–89.
2. Fokkens WJ, Lund VJ, Mullol J, *et al.* EPOS 2012: European position paper on rhinosinusitis and nasal polyps 2012. A summary for otorhinolaryngologists. *Rhinology* 2012; **50**(1): 1–12.
3. Bachert C, Pawankar R, Zhang L, *et al.* ICON: chronic rhinosinusitis. *World Allergy Organ J* 2014; **7**(1): 25.
4. Fokkens W, Lund VJ, Bachert C, *et al.* EAACI position paper on rhinosinusitis and nasal polyps executive summary. *Allergy* 2005; **60**(5): 583–601.
5. Ah-See KL, MacKenzie J, Ah-See KW. Management of chronic rhinosinusitis. *BMJ* 2012; **345**: e7054.
6. Harvey R, Hannan SA, Badia L, Scadding G. Nasal saline irrigations for the symptoms of chronic rhinosinusitis. *Cochrane Database Syst Rev* 2007; **(3)**: CD006394.

deviated nasal septum, septal perforation, or sinonasal tumours. Soft signs associated with CRS can be picked up on general inspection. These include mouth breathing, a horizontal nose crease, and widening of the nasal bridge seen in patients with longstanding untreated nasal polyposis.¹

MANAGEMENT

The management of CRS was set out by the European position paper on rhinosinusitis and nasal polyps.^{2,4} A treatment protocol for primary care exists for situations where the presence of nasal polyps is unknown.^{1–3} This section describes the primary care protocol followed by a brief outline of secondary care protocols that patients may be maintained on in the community. If polyps are identified, the same treatment can be instigated but a referral to secondary care will often be required.

Before management can be commenced the clinician should exclude red flags that would require urgent secondary care referral.^{1,2} These include:

- unilateral symptoms;
- bleeding;
- crusting;
- cacosmia (perceived malodorous smell);
- orbital symptoms (swelling, visual symptoms, or ophthalmoplegia);
- severe frontal headaches;
- frontal swelling; and
- neurological/meningitic symptoms.

In the absence of these symptoms, and if the diagnostic criteria outlined above have been met, the following management can be instigated. There is no requirement for radiological imaging for CRS in primary care.

The initial step described is regular topical nasal steroids and nasal irrigation for a total of 4 months.^{1,2}

NASAL STEROIDS

Intranasal corticosteroid sprays are the mainstay of treatment for both chronic rhinosinusitis with and without nasal polyps.^{3,5} There is strong evidence supporting their use.² The action is the same as in asthma, by reducing the local inflammation through preventing eosinophil infiltration or by reducing the local chemotactic cytokines. Nasal steroid drops also exist but are more difficult to administer, have a higher rate of systemic absorption, and are more commonly used in secondary care.^{2,5} There is a wide array of different sprays with differing application mechanisms that can be trialled.

Some clinicians and patients have hesitations surrounding side effects from long-term intranasal steroid prescriptions. Although there is a degree of systemic absorption, it varies between preparations and is minimal.^{2,4} Other side effects of topical steroids include epistaxis, dry nose, and nasal irritation.^{2,3}

NASAL DOUCHING

Nasal irrigation or nasal douching is irrigation of the nasal cavity with isotonic or hypertonic saline solutions.^{2,5,6} This again has strong evidence in CRS with and without nasal polyps.^{2,6} This can be prepared at home as a mixture of one pint of boiled and cooled water, one teaspoon of bicarbonate of soda, and one teaspoon of salt.² This can then be inhaled into each nostril in turn and allowed to run out. There are also commercially available products that can be purchased, including bottles and pumps, allowing large-volume delivery. This should be used at least once or twice a day to supplement treatment with nasal steroid sprays and should be performed prior to spray application.^{2,5,6} Nasal douching is an underused treatment in primary care and if used regularly can improve the response to treatment.^{2,6}

FURTHER MANAGEMENT

If after 4 weeks there is no improvement in symptoms, then a routine referral to the ENT outpatient department is recommended.^{1,2} Treatment should be continued until this appointment. If the symptoms are controlled, then the treatment should be continued long term.^{1,2}

SECONDARY CARE MANAGEMENT

Treatment can be augmented by the use of oral steroids, antibiotics, and functional endoscopic sinus surgery.^{2,4} This is informed by the use of CT scans of the sinuses. In primary care it is important to note that after surgical management the patient's intranasal steroid treatment and nasal douching should continue long term.^{2,5,6}

CONCLUSION

CRS is a common condition presenting to primary care. This chronic disease is often underdiagnosed and for which the management has been subject to significant review and refinement over recent years. Here we have outlined its diagnosis and management in the adult population in primary care. Appropriate management of correctly diagnosed CRS can significantly improve patients' quality of life and reduce the number of patients requiring secondary care referrals.^{1,2}

Provenance

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Competing interests

The authors have declared no competing interests.

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