DERBYSHIRE JOINT AREA PRESCRIBING COMMITTEE (JAPC)

Management of chronic rhinosinusitis (CRS) with or without nasal polyps

- Rhinosinusitis is defined as inflammation of the nose and paranasal sinuses. In acute sinusitis, there is complete resolution of symptoms within 12 weeks of onset; persistence of symptoms for more than 12 weeks is categorised as chronic rhinosinusitis.

- Chronic rhinosinusitis is a highly prevalent condition affecting 10% of the UK adult population. It is associated with significant reduction of quality of life, high health-care utilisation and significant absenteeism/presenteeism.

- Chronic rhinosinusitis is sub-categorised by the presence or absence of nasal polyps (CRSwNP or CRSsNP respectively).

- Nasal polyps are abnormal inflammatory and oedematous tissue growths that grow inside the nasal passages and sinuses.

- Treatment entails a trial of maximum medical therapy with surgery reserved for recalcitrant cases. Nasal polyps is a clinical diagnosis and imaging by CT scan is only necessary before surgery after an appropriate trial of treatment.

- Surgical treatment aims at reducing/removing nasal polyps however is **not a cure**. The aim of surgery is to create space for better penetration of topical steroid medication, which is the primary treatment. It is essential that topical steroids are continued long-term after surgery to reduce the risk of recurrence.

- The principle of steroid use is to use the lowest dose that is most effective for an individual patient to keep the risk of side effects as low as is reasonable.

Diagnosis in primary care

Diagnosis is made by the presence of two or more persistent symptoms for at least 12 weeks, one of which should be nasal obstruction and/or nasal discharge, and/or facial pain/pressure or hyposmia.

Assess for predisposing factors to chronic sinusitis, such as:

- Allergic rhinitis
- Asthma
- Immunosuppression
- Chronic dental infection

Inform the person of the natural course of chronic sinusitis, and that it may last several months, but does not usually require referral. If the person has an associated disorder as above, advise them that good control of these is also likely to benefit their sinusitis symptoms.

Nasal polyps

Hyposmia / rhinorrhoea / constant blockage are the cardinal symptoms. Rarely an antro-choanal polyp will "ball-valve" i.e. blockage on exhalation, not inhalation.

The aetiology is unknown, and they are NOT associated with allergic rhinitis, although the 2 conditions may co-exist, the incidence of allergic rhinitis is no higher in patients with nasal polyps than the rest of the population.

Examination

Polyps are generally grey/translucent, are not sensitive to touch, which is a discriminatory sign (the turbinates are sensitive to probing!)

It is best practice to use a Thudichum's nasal speculum and headlight for examinations. An otoscope may be useful if Thudichum's is not available.

"RED FLAGS"

If the polyp appears to be unilateral and associated with ipsilateral bleeding, and there is no previous history of 'idiopathic' polyps, then refer as this could be a non-inflammatory polyp, such as inverted papilloma, or even a frank malignancy (e.g. adenocarcinoma from sinus, SCC, lymphoma etc.). However, if there is a past history of inflammatory polyps, then a month's trial of treatment as below is reasonable, with referral if no response.

Self-management advice

If the person suffers from re-current acute episodes (acute exacerbations of chronic sinusitis) recommend self-management measure to relieve symptoms:

- Simple analgesics such as paracetamol or ibuprofen to reduce pain and fever
- Intranasal decongestants used occasionally in adults only (**for a maximum of 1 week**) – can help if nasal congestion is problematic. Oral decongestants are **not** recommended. Long term inappropriate use of decongestants can result in the development of rhinitis medicamentosa (medicine induced rhinitis).
- Many patients find nasal douching with saline prior to administration of topical steroids helpful, e.g. SinuRinse and Sterimar which are OTC preparations. Further information available here.
- Applying warm (not hot) face packs
- There is no evidence for using steam inhalation (NICE NG79), however, patient may choose to trial this for symptomatic relief as part of self-care.

Antibiotic prescribing

- A short course of antibiotics might be appropriate (when symptoms are not improving after 10 days of acute sinusitis, if recurrent acute sinusitis or chronic sinusitis with purulent rhinorrhoea) – see local antimicrobial guidelines
- Seek specialist advice before prescribing long-term antibiotics (e.g. macrolids), as evidence for this approach is limited

Treatment

Thankfully, **most** idiopathic inflammatory polyps are steroid responsive. Akin to the BTS asthma guidelines, we can think of a "ladder" or stepped approach, but ideally patients shouldn't be left long term on anything other than the 1st "rung".

Management of chronic inflammatory rhinosinusitis is long term, **generally not curative** and is tailored to the most effective and acceptable control of symptoms of individual patients improving their daily performance and/or quality of life. This should be considered as a long-term condition.

Consider nasal irrigation with saline solution to relieve congestion and nasal discharge.

Intranasal corticosteroids are recommended for the treatment of chronic sinusitis both with and without nasal polyps in the European Position Paper on Rhinosinusitis and Nasal Polyps 2012 [Fokkens et al, 2012], in combination with nasal irrigation.

Step 1: REGULAR use of a steroid nasal spray:

Drug	Strength	Dose as per BNF	28d Cost (maintenance)	INS Bio-availability
Mometasone	50micrograms/ metered spray	2 sprays into each nostril **once daily**, increased if necessary to 4 sprays into each nostril once daily. When control achieved reduce to 1 spray into each nostril once daily	£8.19 x 140 doses **£3.27 for 28 days**	0.5%
Fluticasone furoate (Avamys)	27.5micrograms/ metered spray	2 sprays into each nostril **once daily** increased to twice daily if required. When controlled reduce to 1 spray into each nostril once daily	£6.44 x 120 doses **£3.00 for 28 days**	0.5%

NB Beclometasone removed from guideline due to high bioavailability and not suitable for long term use due to high levels of systemic exposure. Beclometasone OTC may be suitable for short term treatment.

Assess response after 4 weeks

If symptoms do not respond satisfactorily

Step 2: ADD steroid nasal drops:

- Drug: betamethasone 0.1% nasal drops
- Dose: 2 – 3 drops into each nostril two to three times daily
- Administer in the "head hanging" position – proven to improve distribution to the target area, and reduce amount passing directly to the pharynx to be swallowed. Not recommended for long-term use

Assess response again after a further 4 weeks

If symptoms resolve - stop betamethasone nasal drops, and continue with steroid nasal spray.
Recurrence/ persistence indicates that steroid nasal drops may need to be re-started, consider step 3 (possibly in combination with step 4)

Step 3: Stop nasal drops and steroid nasal spray and prescribe fluticasone propionate nasal drops

- Drug: fluticasone propionate nasal drops 400 micrograms/unit
- Dose: 200micrograms (approx. 6 drops) into each nostril once or twice daily (total dose of 400 to 800 microgram per day). BNF states consider alternative treatment if no improvement after 4-6 weeks)
- Administer in the "head hanging" position
- When effective, revert to step 1 steroid nasal spray as maintenance.

Step 4: Systemic (oral) steroids

- Drug: prednisolone tablets
- Dose: 60mg once daily for 3 days, then 40mg for 3 days, then 20mg for 3 days, then 10mg for 3 days, to be followed by step 2, then step 1 as maintenance (de-escalation of steroid use)
- Usual contraindications apply

Step 5:
Refer for consideration of surgery/confirmation of diagnosis of nasal polyps

Referral

Consider routine referral to an Ear, Nose, and Throat (ENT) specialist if the person has:

- Frequent recurrent episodes of acute sinusitis which are troublesome (such as more than three episodes requiring antibiotics in a year)
- Unremitting or progressive facial pain (but refer urgently if a tumour is suspected)
- Nasal polyps which are causing significant nasal obstruction
- Following a trial of intranasal corticosteroids for 3 months which was ineffective (after assessing treatment compliance and technique)
- At the time of referral explain to the patient that surgery may not be offered. If offered, surgery is not curative and aims to open up space for better penetration of topical treatment, which must be continued long term post-surgery to prevent recurrence.

References

1. ENT Commissioning guide: Rhinosinusitis
2. NICE Clinical Knowledge Summaries: http://cks.nice.org.uk/sinusitis#!topicsummary (accessed February 2015, December 2018, December 2020)
3. The European Position Paper on Rhinosinusitis and Nasal Polyps (2012)

Reviewed in consultation with

Sean Mortimore	Consultant ENT, Head & Neck Surgeon UHDBFT
Professor Owen Judd	Consultant Neurotologist and Laryngologist Ear, Nose and Throat Surgeon UHDBFT
Mr Wale Olarinde	Consultant ENT/Head & Neck Surgeon (CRH)
Iman Khodaei	ENT & Facial Plastics Consultant (CRH)
Sharinie Yapa	Consultant ENT, Rhinology and Facial plastics Surgeon (CRH)
Paul Davies	ENT (CRH)
	Derbyshire ICB Pharmacy Policy Team

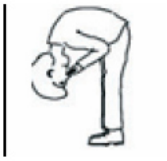
Appendix 1- Administration of nasal drops in head hanging position; administration of nasal spray

Correct procedure for the installation of nasal drops

How to put the drops in

Before you put the drops in, you must choose one of the positions shown in these pictures. Although they may not be easy, the positions will make sure the drops get to where they are needed.

1. Gently blow your nose to clear it.
2. While standing up, bend right over.



3. If you can't do this, kneel down and then bend right over.

4. Put the opened container into one nostril and gently squeeze.
5. Keep squeezing until the sides of the container touch each other. This will mean that about half the dose has been given (about 6 drops).
6. Repeat this step to use the rest in your other nostril.
7. Stay with your head down for at least one minute after putting the drops in.

If these positions are difficult you can lie on a bed with your head tilted over the edge. After you have put the drops in, rest your head sideways on the bed for at least one minute.

Be careful not to get the drops in your eyes or on broken skin. If you do, rinse your eyes or skin with water immediately.

Avoid instillation using below position

See also patient information leaflets (Nasal drops) on UHDBFT website
https://www.uhdb.nhs.uk/download.cfm?doc=docm93jijm4n1395.pdf&ver=29040

Correct procedure for the application of nasal sprays

1. Shake bottle well 2. Look down 3. Using Right hand for Left nostril put nozzle just inside nose aiming towards outside wall 4. Squirt once or twice (two different directions ↗→) 5. Change hands and repeat for other side 6. Do not sniff hard