10-MINUTE CONSULTATION

Sinusitis

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USEFUL READING

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Lindbaek M, Hjortdahl P. The clinical diagnosis of acute purulent sinusitis in general practice—a review. *Br J Gen Pract* 2002;52:491-5.

Information for patients: ENT UK. Sinus infection (sinusitis). www.entuk.org/patient_info/nose/sininitis.html
Patient UK. Sinusitis. www.patient.co.uk/showdoc/23068821

This is part of a series of occasional articles on common problems in primary care. The BMJ welcomes contributions from general practitioners to the series

A 39 year old woman attends your surgery with a four day history of unpleasant yellowish nasal discharge, blocked nose, and severe pain across her cheeks and between her eyes. One week ago she had had a “bad cold” and she thought she was getting better, but then this started.

What issues you should cover

Sinusitis, now termed rhinosinusitis, is inflammation of one or more of the paranasal sinuses. It is clinically defined by at least two of the following symptoms: blockage or congestion; discharge or postnasal drip; facial pain or pressure; reduction or loss of smell. In acute rhinosinusitis symptoms persist for up to 12 weeks, with complete resolution; in chronic rhinosinusitis symptoms persist for more than 12 weeks without complete resolution. Viruses cause mucosal swelling and obstruct the sinus openings into the nose. The symptoms result from increased mucus production, reduced drainage, ciliary paralysis, and stasis of secretions. Secondary bacterial infection can occur, commonly by *Streptococcus pneumoniae*, *Haemophilus influenzae*, or (in children) *Moraxella catarrhalis*. Atopy may also contribute to the development of rhinosinusitis, but evidence is lacking and its role is unclear.

Bacterial or viral?—Although the distinction between bacterial and viral rhinosinusitis is unclear, in acute rhinosinusitis secondary bacterial infection may be indicated by:

- Duration longer than seven days
- Purulent green or yellow nasal discharge
- History of improvement, then deterioration in symptoms
- Fever and general malaise
- Facial pain and tenderness, particularly if unilateral or asymmetrical.

Is it something else?—Differential diagnosis may be:

- Rhinitis—nasal congestion, rhinorrhoea, sneezing
- Referred dental pain
- Temporomandibular joint dysfunction
- Tension headache
- Migraine
- Trigeminal neuralgia
- Atypical facial pain
- Neoplastic conditions.

Complications may be present:

- Periorbital cellulitis—redness, oedema, pain, fever, chemosis
- Orbital abscess—as above plus proptosis, ophthalmoplegia, diplopia, diminished visual acuity
- Meningitis—headache, neck stiffness, drowsiness, photophobia

- Osteomyelitis—frontal sinus osteitis and doughy oedema of the skin over the frontal bone producing a mass (Pott’s puffy tumour)
- Cerebral abscess—headache, altered conscious state, visual disturbance, unsteadiness, seizures, or other focal neurology.

What you should do

Consider conservative treatment:

- Reassurance
 - Steam inhalation daily—ensure that care is taken to avoid scalding injury
- Possible medical treatments are:
- Analgesia—stepwise paracetamol, ibuprofen, codeine as required in accordance with the WHO analgesic ladder
 - Decongestants:
 - Oral (pseudoephedrine)—can cause insomnia, anxiety, palpitations, and tachycardia (caution in certain groups, for example people with hypertension)
 - Topical (xylometazoline)—prolonged use (>1 week) may cause rebound rhinitis
 - Intranasal corticosteroids—may be of benefit, particularly in chronic rhinosinusitis, recurrent acute rhinosinusitis, and rhinitis
 - Antibiotics—if history points toward bacterial cause. A prolonged course (2 weeks or more) may be required due to reduced drug delivery; follow local guidelines:
 - First line—amoxicillin (trimethoprim or cefaclor if patient is allergic to penicillin)
 - Second line—co-amoxiclav (clarithromycin if patient is allergic to penicillin)
- If pus is present, take a swab for bacteriology before starting antibiotics. Delayed prescribing of antibiotics may have a role.

Referral to ENT:

- If complications are suspected, refer urgently
- If patient is unresponsive to treatment consider immunocompromise (HIV infection, congenital immunodeficiency) or granulomatous disease
- If symptoms last more than 12 weeks or recurrent acute rhinosinusitis develops:
 - No need to arrange investigations (e.g. imaging), specialist opinion is required.
 - Specialist can perform nasendoscopy to confirm diagnosis.
 - Plain x rays of the sinuses are no longer indicated; specialist may request computed tomography, generally as a precursor to surgical intervention.