



CHAPTER 17

EAR, NOSE AND THROAT DISORDERS

Posterior bleeding: insert a posterior nasal pack, using a Foley's catheter. An anterior nasal pack should then be inserted. A posterior nasal pack should not be left in place for more than 48 hours. Deflate after 24 hours.

REFERRAL

- persistent bleeding
- systemic disease

17.3 RHINITIS, ALLERGIC, PERSISTENT

J30.4

NON-DRUG TREATMENT

Avoid allergens and irritants.

DRUG TREATMENT

- chlorpheniramine, oral, 4 mg three times daily

For patients intolerant to chlorpheniramine:

- cetirizine, oral, 10 mg daily
- corticosteroids, topical, aqueous nasal solution, 2 sprays in each nostril twice daily

17.4 SINUSITIS, BACTERIAL, COMPLICATED

J01.9

DESCRIPTION

Acute bacterial sinusitis complicated by extension to the orbit or intracranially. Extension to the orbit gives rise to orbital cellulitis or orbital periosteal abscess, both of which present with visual disturbances (often irreversible), ophthalmoplegia and proptosis. External signs of inflammation may be absent. Intracranial extension may result in meningitis, subdural empyema, brain abscess, or thrombosis of cavernous sinus/cortical veins. Radiography of the paranasal sinuses, preferably by CT scan, should be done in all cases.

In immunosuppressed or diabetic patients presenting with features of bacterial sinusitis also consider fungal infections such as mucormycosis.

NON-DRUG TREATMENT

Sodium chloride 0.9% spray or irrigation of the nasal cavity may provide symptomatic relief.

DRUG TREATMENT

- ceftriaxone, IV, 2 g 12 hourly and **refer**

Topical nasal decongestants, e.g.:

- oxymetazoline 0.05%, intranasal, administered 8 hourly

URGENT REFERRAL

- proptosis
- ophthalmoplegia

REFERRAL

- after initiating antimicrobial therapy to a centre where an appropriate surgical specialist, i.e. ophthalmologist, ENT specialist or neurosurgeon, is available
- suspected fungal sinusitis

17.5 OTITIS MEDIA

H66.9

NON-DRUG TREATMENT

Do not instil anything into the ear.
Avoid getting the inside of the ear wet.

DRUG TREATMENT

- amoxicillin, oral, 500 mg 8 hourly
Uncomplicated cases: 5 days.
Complicated cases and those with risk factors: 10 days.

Penicillin allergy:

- erythromycin, oral, 500 mg 6 hourly for 10 days
- chlorpheniramine, oral, 4 mg three times daily

For pain:

- paracetamol oral, 1 g 6 hourly as needed

REFERRAL

- perforation of the eardrum
- no response after 5 days treatment
- no pain relief
- bulging eardrum, not responding to treatment after 24 hours
- recurrent otitis media

17.6 MASTOIDITIS

H70

DESCRIPTION

Infection of the mastoid air cells, usually complicating otitis media. Evidence of external inflammation is present over the mastoid bone. Diagnosis should be confirmed radiographically, preferably by CT scan.

DRUG TREATMENT

- ceftriaxone, IV, 2 g 12 hourly

REFERRAL

- after initiating antimicrobial therapy, to a centre where mastoidectomy can be performed

17.7 OTITIS EXTERNA**17.7.1 OTITIS EXTERNA, NECROTISING**

H60.9

DESCRIPTION

Necrotising otitis externa is typically associated with elderly diabetics or other immunocompromised patients. Patients complain of otalgia and otorrhea persisting more than a month, which is unresponsive to medical therapy. Nearly always due to *P. aeruginosa*. Cranial nerve palsies frequently occur, especially 7, but also 9, 10 and 12.

NON-DRUG TREATMENT

Debridement as indicated.

Insert dry wick such as a dried sponge, into the canal under direct vision. Remove wicks 2 days later, and replace if necessary.

DRUG TREATMENT

- ciprofloxacin, oral, 500 mg 12 hourly for 4–6 weeks

REFERRAL

- for surgical debridement of necrotic bone in non-responders
- all cases to a centre where CT scan of the affected area can be done to assess the extent of the disease

17.8 ABSCESS, PERITONSILLAR

J36

DESCRIPTION

Peritonsillar abscess or quinsy is a collection of pus lateral to the tonsil, i.e. underneath it pushing it toward the midline. It typically present with trismus and sore throat. Other features include:

- unilateral throat pain
- dysphagia
- drooling
- muffled voice ("hot potato" voice)
- fever

NON-DRUG TREATMENT

There are 3 main methods:

- needle aspiration of pus
- incision and drainage
- abscess tonsillectomy, either unilateral or bilateral

DRUG TREATMENT**Antibiotic therapy**

Total duration of therapy: 10 days

- benzylpenicillin (Penicillin G), IV, 2 million units 6 hourly
- Follow with:
- phenoxymethylpenicillin, oral, 500 mg 12 hourly

Penicillin allergy:

- clindamycin, IV, 600 mg 8 hourly
- Follow with:
- clindamycin, oral, 300 mg 8 hourly

17.9 VERTIGO, ACUTE

R42

DESCRIPTION

An acute syndrome, consisting of vertigo, nystagmus, nausea and vomiting and postural instability. It is important to differentiate between peripheral and central causes of vestibular dysfunction.

PERIPHERAL CAUSE

Patients frequently present with motion-induced vertigo, which is most often rotational, with nystagmus and thus a positive Dix-Hallpike test. The onset is usually sudden and symptoms intermittent. Associated abnormalities of hearing may be present and associated nausea and vomiting worse than with central causes. Aetiology includes benign paroxysmal positional vertigo and vestibular neuritis, amongst others.

CENTRAL CAUSE

Patients may have additional signs of brainstem or cerebellar dysfunction with subtle onset of symptoms, which are constantly present or progressively worsening in severity. Aetiology includes cerebellar stroke and space occupying lesions of the posterior cranial fossa.

NON-DRUG TREATMENT

It is essential to find the cause and treat appropriately. Consider patients with possible cerebellar stroke or intracranial space occupying lesion for neuro-imaging and possible neurosurgical management.

BENIGN POSITIONAL VERTIGO

Good results may be achieved with particle relocation manoeuvres, such as the Epley manoeuvre. In a third of patients, symptoms recur after 1 year and a second session may be required.



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DRUG TREATMENT

This is only for symptomatic relief and is determined by the aetiology.

Discontinue all medication as soon as symptoms subside as the medication itself may cause vertigo due to involvement of the unaffected side.

- chlorpheniramine, oral, 4 mg 6 hourly
Beware of side effects, related to antimuscarine effects in patients with glaucoma and prostatic enlargement.
Sedation may be an additional problem.

If vomiting continues:

- metoclopramide, oral, 10 mg 6–8 hourly

CEREBELLAR STROKE

See Section 14.1: Cerebrovascular Disease

REFERRAL

- suspected intracranial mass lesions or cerebellar stroke as indicated
- suspected vestibular neuritis
- patients not responding to therapy for exclusion of alternative aetiology



CHAPTER 18 EYE DISORDERS

18.1 CONJUNCTIVITIS

H10

DESCRIPTION

Inflammation of the conjunctiva, usually due to allergy or infection (viral or bacterial). Conjunctivitis is usually bilateral. Other causes of the red eye are often unilateral.

NON-DRUG TREATMENT

Supportive therapy with cold compresses.

If it is due to an infection, counsel on the importance of:

- frequent hand washing by patients and family members
- using separate linen, towels and washcloths
- avoiding direct contact with infected material or individuals.

Contact lenses should not be worn if conjunctivitis is present or during a course of topical therapy. Soft lenses should not be worn within 24 hours of instilling eye drops containing the preservative benzalkonium chloride.

18.1.1 CONJUNCTIVITIS, ADENOVIRAL

H13.1*

DESCRIPTION

Adenovirus is the most common cause of infective conjunctivitis. It is usually bilateral. It may be associated with an upper respiratory infection. There may be preauricular lymphadenopathy.

DRUG TREATMENT

- sodium chloride 0.9%, eye washes or irrigations
If sodium chloride 0.9% is not available use cooled boiled water or sterile water.
- oxymetazoline 0.025%, ophthalmic drops, 6 hourly for 7 days

18.1.2 CONJUNCTIVITIS, ALLERGIC

H10.1

DESCRIPTION

There is moderate to severe itching. It may be associated with hay fever or other features of allergy. There may be acute inflammation of the conjunctiva, or chronic cobblestone elevations of the tarsal conjunctiva or chronic thickening and discoloration of the perilimbal conjunctiva.



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DRUG TREATMENT

Drug treatment should be for short-term use.

For relief of mild symptoms:

- oxymetazoline 0.025%, ophthalmic drops, instill 1–2 drops 4 times daily – short term use

For relief of symptoms in moderate and severe cases:

- fluoromethalone, ophthalmic drops, instill 1–2 drops 4 times daily – short term use

For control of allergic response in chronic cases:

- sodium chromoglycate 2%, ophthalmic drops, instill 1–2 drop 4 times daily

Note:

Topical corticosteroids are contraindicated if there is no facility for slit lamp biomicroscopic examination of the eye.

18.1.3 CONJUNCTIVITIS, BACTERIAL

H13.1*

DESCRIPTION

The following organisms may be involved:

- *S. aureus*
- *H. influenzae*
- *S. pyogenes*
- *Moraxella* species
- *S. pneumoniae*
- *N. gonorrhoeae*
- *Pseudomonas* species

It is usually bilateral. There is a mucopurulent discharge and there may be matting of lashes in the morning. The eyelid may be swollen.

DRUG TREATMENT

- gentamicin, ophthalmic drops, instill 1 drop 4–6 hourly during the day

OR

chloramphenicol 1%, ophthalmic drops, instill 1 drop 4–6 hourly during the day

AND

- chloramphenicol 1%, ophthalmic ointment, apply at night

18.2 ENDOPHTHALMITIS, BACTERIAL

DESCRIPTION

Infection of the ocular cavity, which is an emergency as it can cause serious visual disturbances. This may occur spontaneously or post-surgery.

Spontaneous endophthalmitis is generally caused by haematogenous spread in acutely ill bacteraemic patients. Usual organisms are *S. pneumoniae* and *N. meningitidis*.

Post-surgical causative organisms include *S. aureus*, *P. aeruginosa*, and proteus.



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DRUG TREATMENT

SPONTANEOUS ENDOPHTHALMITIS

- ceftriaxone, IV, 2 g daily for 7 days

POST-SURGICAL ENDOPHTHALMITIS

Specialist initiated, vitrectomy often required.

- ceftazidime, intravitreal, 2.25 mg

AND

- vancomycin, intravitreal, 1 mg

In addition, if there is soft tissue involvement:

- ciprofloxacin, oral, 750 mg 12 hourly may be added

18.3 GLAUCOMA

H40.9

DESCRIPTION

Glaucoma is characterised by damage to the optic nerve (in the form of cupping) with associated visual field loss, for which raised intra-ocular pressure (IOP) is a primary risk factor. Glaucoma may occur as a primary condition or secondary to other ocular conditions.

Glaucoma can be further classified as acute or chronic and open- versus closed-angle. The condition is usually bilateral, but may be unilateral or asymmetrical (especially with secondary causes).

Clinical features

Chronic:

- most common
- mostly asymptomatic
- history of gradual loss of vision in the affected eye or loss of visual field
- often suspected after seeing cupping of optic disc on routine fundoscopy or finding elevated intra-ocular pressure on screening.

Acute:

- sudden onset of severe pain and eye redness, associated with nausea and vomiting
- loss of vision in the affected eye
- coloured haloes or bright rings around lights
- hazy-looking cornea
- fixed, semi-dilated pupil
- severely-elevated intra-ocular pressure. When measured with finger palpation, the affected eye feels hard, compared to the other eye.

DRUG TREATMENT

OPEN ANGLE GLAUCOMA, CHRONIC

Refer to an ophthalmology unit for treatment.

First line **β -blocker**

Non-selective, e.g.:

- timolol 0.25%, ophthalmic drops, instill 1 drop twice daily

Selective, e.g.:

- betaxolol 0.5%, ophthalmic drops, instill 1 drop twice daily
Fewer pulmonary side effects with the use of this drug.

Second line**Prostaglandin analogues, e.g.:**

- latanoprost, ophthalmic drops, instil 1 drop once daily
Use as first line if patient has contra-indication to use of β -blocker.
Use in place of β -blocker if patient has intolerable side effects with β -blocker or if there is no significant reduction in IOP with β -blocker alone.
Use in combination with β -blocker if there is significant reduction in IOP on β -blocker, but patient still has progression of disease or target IOP is not reached on β -blocker alone.

In severe cases, carbonic anhydrase inhibitors:

- acetazolamide, oral, 250 mg 6 hourly
Use if intra-ocular pressure is not controlled on all the above – usually as a temporising measure before ocular surgery.

ANGLE CLOSURE GLAUCOMA (ACUTE)

Institute initial therapy and then refer to an ophthalmology unit.

Try to achieve immediate reduction in IOP.

- acetazolamide, oral, 500 mg immediately as a single dose, followed by 250 mg 6 hourly
- timolol 0.25% or 0.5%, ophthalmic drops, instill 1 drop twice daily

Treat patient for associated pain and nausea.

Where these measures fail:

- mannitol, IV, 1.5–2 g/kg as a 20% solution over 30–60 minutes for short-term use only
OR
glycerin, oral, diluted to 50% solution, 1–1.5 g/kg, for short-term use only

To constrict the pupil (open the angle), once the IOP has dropped:

- pilocarpine 2%, ophthalmic drops, instill 1 drop every 6 hours

REFERRAL

- all to ophthalmology unit