Traumatic rupture of ear drum (etiology)

- By foreign body or unskilled instrumentation or syringing
- Sudden air compression, as in boxing, hand-slap, blast or rapid descent in non-pressurised aircraft
- Sudden fluid compression, by a blow on ear when the canal is filled with fluid.
- Inflation of eustachian tube.
- Fracture base of the skull
Clinical features

• Pain
• Deafness
• Tinnitus and vertigo
• Perforation is usually irregular with red margins
• Blood usually present in the meatus
Treatment

• Prevent infection
• Leave blood in place
• Never syringe
• Myringoplasty at a later date
Fracture of temporal bone (Longitudinal)

- Longitudinal fracture (80%)
- Fracture line is in long axis of petrous temporal bone and involves the tympanic cavity, tympanic membrane and external auditory meatus
Clinical features

- Conductive deafness, usually recovers
- Bleeding from the ear
- Fracture line may be visible in EAM
- Facial nerve paralysis may occur
- CSF leak rarely
Fracture of temporal bone (transverse)

- Less common
- Fractures runs through the petrous temporal bone at right angle to its long axis and involves th labyrinth and IAM
Fracture of temporal bone clinical features

- Sensorineural deafness, usually permanent
- Vertigo
- Hemotympanum
- Facial nerve paralysis (uncommon)
Treatment

• Treat as fracture base of the skull
Barotraumatic otitis media (otitic barotrauma)

• A non-infective inflammatory reaction produced in the lining of the middle ear cleft when air pressure within it is considerably below that of surrounding atmosphere.
Barotraumatic otitis media (aetiology)

- Tubal locking (occurs when there is difference of 80mmHg pressure)
- Rapid descent in nonpressurised air creft
- Divers rapid descent
- In a pressure chamber
Barotraumatic otitis media

- Retraction of TM
- Vascular engorgement in the lining of the middle ear cleft
- Oedema, echymosis and transudation of serum
- TM may rupture
- Secondary infection is uncommon
Barotraumatic otitis media  
(clinical features)

• Discomfort and pain
• Deafness and autophony
• Tinitis
• Vertigo
• Reddening over the malleus handle
• Redness of the whole TM
• Bubbles and air fluid levels in middle ear
• Hemotympanum and rarely rupture of TM
Treatment

- Supportive
- Myringotomy