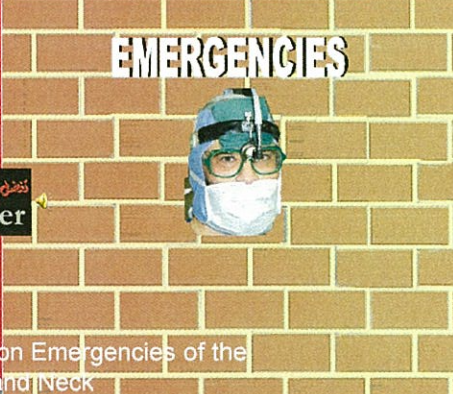


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 King Saud University
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 Facial Plastic Division,
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EMERGENCIES


تدخل الطوارئ
Enter



Common Emergencies of the Head and Neck


Trauma of the External Ear

- Injury of the auricle and ext. canal (x perichondrium --> cart. necrosis)
- Auricular Lacerations & Avulsions




treatment

- ⦿ Laceration:
- ⦿ Primary closure with monofilament suture material (6-0 or 7-0)
- ⦿ Antibiotic : Degree of contamination
- ⦿ Comprehensive Laceration (cartilaginous & skin):
 - debridement
 - close the wound
 - antibiotic




- Cartilage : 5-0 absorbable suture
- Skin : monofilament 6-0 suture
- Replantation of partial avulsion
- 8 hours ischemia periods are tolerable and allow the grafting
- Plastic reconstruction in interval



prognosis

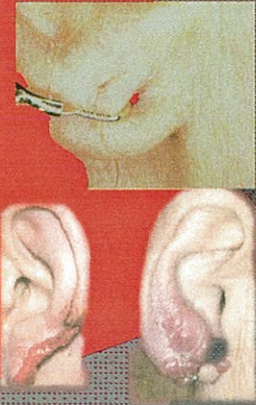
Bacterial infection :
 Perichondritis

- ⦿ **cauliflower ear**
- ⦿ **atresia of the meatus**

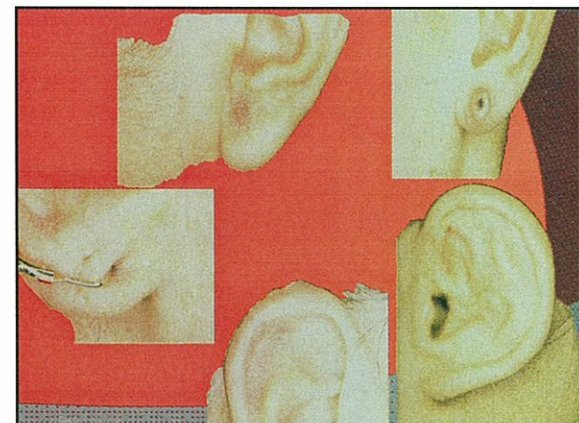
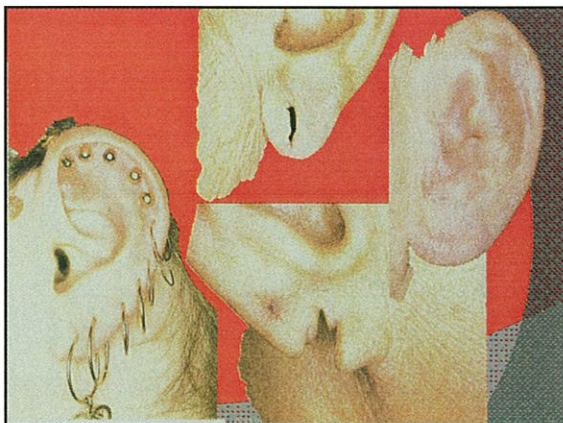
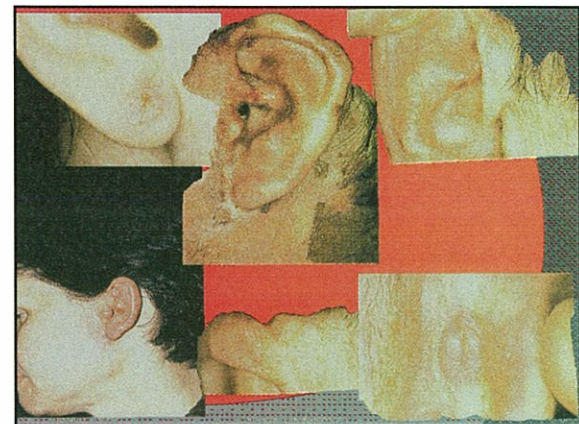
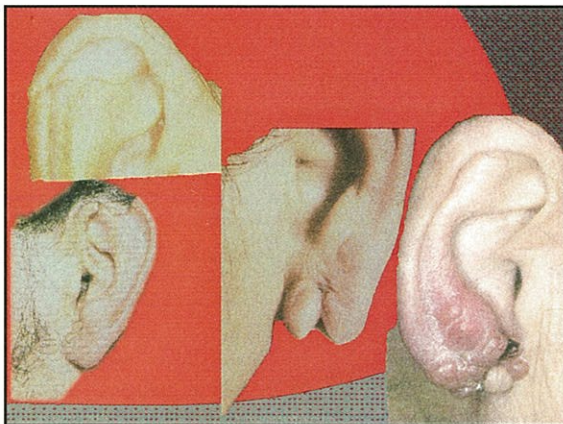
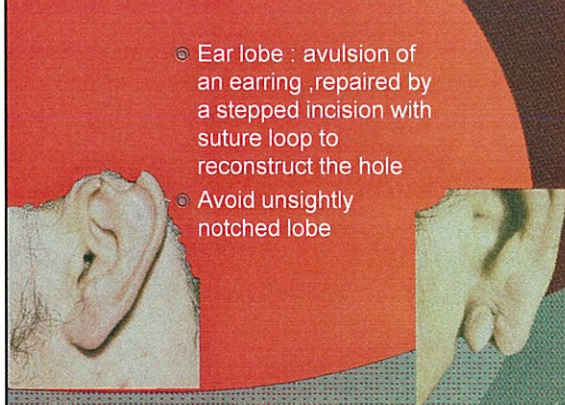


LACERATIONS

- Excellent blood supply
- Suturing severe laceration & avulsed tissue
- Trimmed Exposed Cartilage
- Human Bites: dressing & delaying closure 2-3days



- Ear lobe : avulsion of an earring ,repaired by a stepped incision with suture loop to reconstruct the hole
- Avoid unsightly notched lobe



Contact Dermatitis

Neomycin

11/26/2011 Rhinothorax.com/2011/05/05/

Hematoma of the Auricle

- Closed blunt injury (skin & perichondrial)
- > subperichondrial hematoma
- **Treatment:**
 - wide incision & curettage and window
 - oiled silk compression (1 week)
 - antibiotic
- **Aspiration** ----> seroma or perichondritis

Auricular Hematoma

- ✓ Blunt injury [contact sports]
- ✓ Skin is tightly bound
- ✓ Cartilage nutrition
- ✓ Hematoma [?infec.] → necrosis
- ✓ Incision & drainage+ aseptic technique+ GA+ PD +BSA
- ✓ Neglected treat.

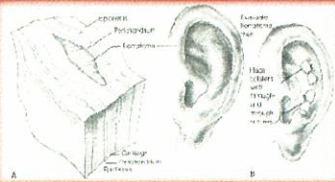
Prof. RAFAEL

Auricular Hematoma

- Blunt trauma
 - Shear injury at anterior auricular skin
 - Contact sports, child abuse
- Hematoma
 - Between cartilage/perichondrium
 - Fluctuant anterior ear swelling
- Treatment
 - Needle aspiration inadequate
 - Incision & drainage recommended
 - Compressive dressing
 - Antistaph antibiotics
- Complications
 - Infection/abscess
 - "Cauliflower" ear


Right Auricular Hematoma

Auricular Hematoma Treatment



Labels in diagram: Epineurium, Periosteum, Cartilage, Incision, Drainage, Bolsters, Auricle, Hematoma, Face, Cartilage, Hematoma, Bolsters.


Incision & Drainage with Bolsters




"Cauliflower" Ear

Untreated Hematoma

1. C.T. organization ,
2. 2nd. calcification ,
3. Deformity of the auricle
4. **cauliflower ear**



Trauma of The Ear



11/27/2011 | Rhinoplasty@yab.uj.com | 21

Frostbite

Grade 1 - Vascular spasm (Skin Cyanosis)
 Grade 2 - Ischemia ---> Vesicles
 Grade 3 - Deep tissue necrosis



1 2 3


Treatment of Frostbite and Burns

- n Sterile dressings
- n Antibiotics
- n I.V. vasodilators
- n Block of stellate ganglion
- n Keeping dry
- n Attention to skin & cartilage



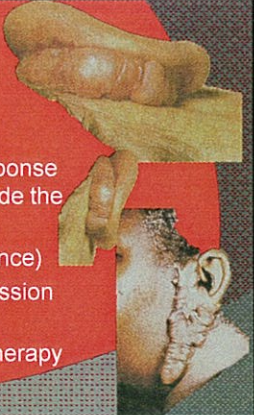
Frostbite Late complication

1. Necrosis of the auricle and atresia
- OR
2. Stenosis of EAM




KELOID Scars

- Common on ear lobes
- Black-Skinned people
- Exaggerated healing response
→ excess collagen outside the scar, difficult to treat
- Simple excision (recurrence)
- Silicone gel clip compression & steroid injection?!
- Excision & local Radiotherapy

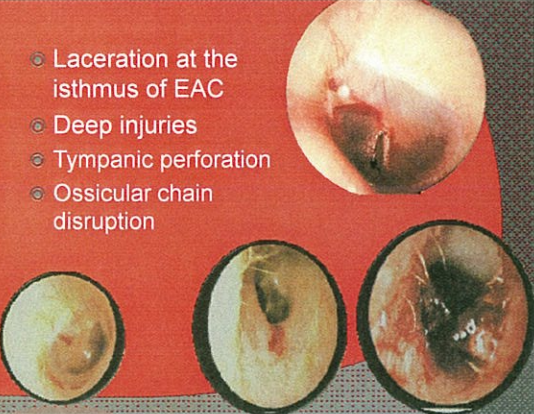


Injuries to the external meatus

- Insertion of FB
- Proverbial matchstick (wax)
- Incorrect Insertion of a syringe (dewaxing)
- Aural suction
- Laceration at the isthmus of EAC




- Laceration at the isthmus of EAC
- Deep injuries
- Tympanic perforation
- Ossicular chain disruption



Middle & Inner ear injuries

- Blast injury
- Barotrauma
- Head injury
- Surgical trauma

- Usually caused by accidents
- 2% to 3% of all injuries
- in 45% of fractures of skull base



Blast injuries

- Explosions or Slap on the ear
- Multiple site of damage
- Intensity of pressure
- TM rupture
- SNHL & Tinnitus (cochlea)
- Imbalance (vibibular)

Otitic barotrauma

- Otalgia
- Haemotympanum
- TM rupture ?
- Dysfunction of the Eustachian tube
- Descent in flight or scuba diving
- Valsalva manoeuvre & nasal decog.
- Myringotomy
- Prophylactic measures



Head injuries


- T. Bone Fractures ?
- SNHL , Vertigo & Facial paralysis
- Otological trauma
- Concussed cochlea
- Benign paroxysmal position vertigo
- Central vestibular apparatus

Surgical Trauma

- CHL OR SNHL
- Ear operation:
- Stapedectomy , mastoid surgery
- Facial nerve at risk

Ear and Nasal Sinuses Examination in Head injury

- Fresh bleeding or CSF leak from the ear or the nose.
- Evidence of blood or brain tissue in the EAM or the nose.
- Facial paralysis. & Hearing loss.
- Hemotympanum, rupture of the T.M. , or a break in the outline of the annulus.
- Dizziness, disorders of balance, and nystagmus.
- Bleeding from nasopharynx.




Temporal Bone Fracture

Blunt >> Penetrating

- MVA, assault, fall
- Associated with life-threatening injuries


Evaluation

- Trauma protocol/clear C-spine
- Assess facial nerve function early
 - Immediate vs. delayed
- Ear examination - hemotympanum, CSF, TM perforation
- Assess hearing-tuning forks, audiogram
- Radiology
 - Head CT- evaluate for brain injury
 - CT of temporal bone - with bone windows
 - Evaluate extent of fracture




Hemotympanum

Temporal Bone Fracture Physical Examination



Raccoon's Eyes




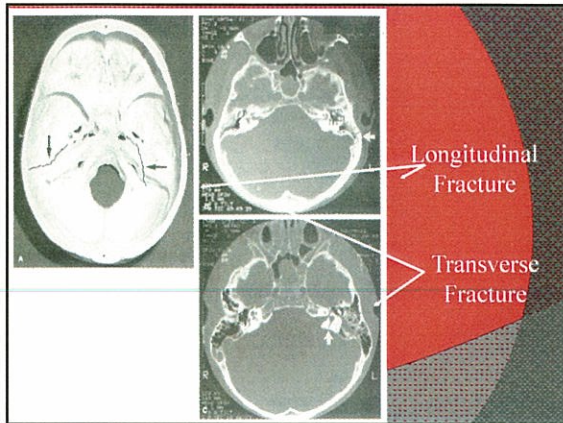
External Canal Laceration

Temporal Bone Fracture

- 1 Direct fractures: e.g. gunshot wounds. (Penetrating perforating fracture & brain damage)
- Indirect fractures:
 - #- Diffused external violence
 - 1- Longitudinal fracture
 - 2- Transverse fracture
- Dura may torn

@Latent infection: ET → Meninges







Longitudinal T.B. Fracture

Clinical picture

- Hemotympanum
- T.M. tear
- Bleeding EAM
- # Anulus Tympanicus
- Step formation EAM
- Deafness.
- ! CSF otorrhea.
- 20% Facial paralysis neuropraxia partial axonotmesis





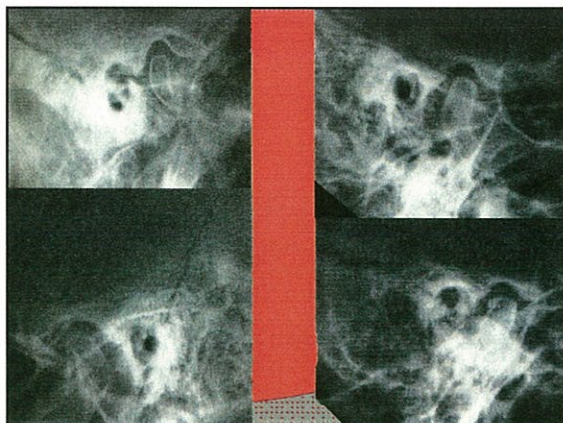
Longitudinal T.B. Fracture



Syringing OR Manipulations within the E.A.M.

Diagnosis


- Otoscopic finding
- Schueller's view
- Tomograms
- High-resolution C.T. (CSF, Facial paralysis)

Transverse pyramidal fractures

Clinical picture

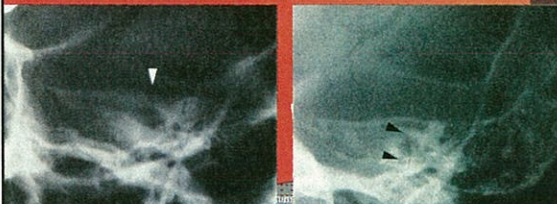
- Intact EAM
- Intact TM
- ± hemotympanum
- Hearing loss
- Vertigo
- Spontaneous nystagmus
- 50% Facial paralysis
- > Axonotmesism or neurotmesis
- Eustachian tube - CSF





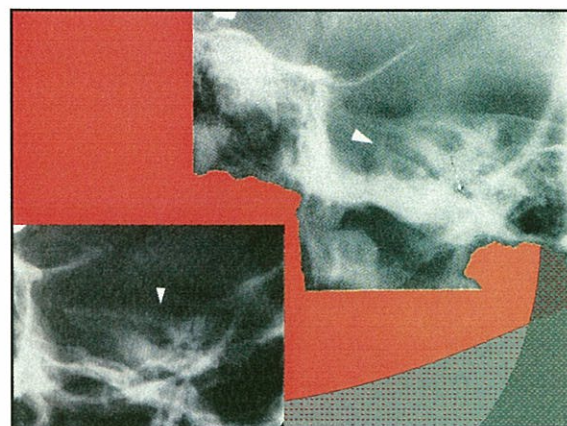
Diagnosis

- Otoscopic and functional findings & High-resolution C.T.
- X-ray Stenver's view
- Tomograms
- EMG, Neuronography
- Schirmer test and gustometry



Treatment of T.B. Fractures

- Otogenic meningitis : antibiotics.
- T.B. exploration: in early or late complications
- Emergency surgery
 - (1) Traumatology
 - [2] Neurosurgery
 - (3) Otology
 - (4) Maxillofacial surgery
 - (5) Ophthalmology

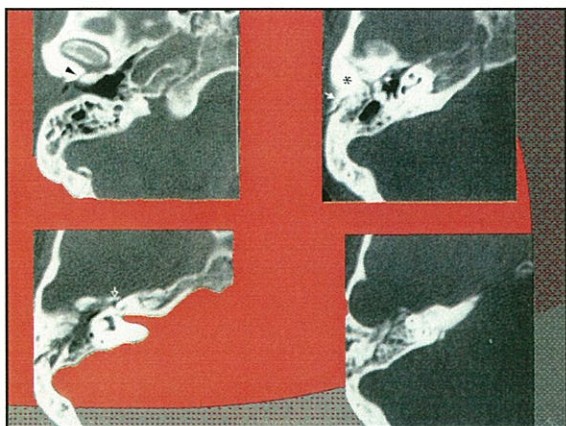


Temporal Bone Fracture Management

- Facial nerve paralysis
 - Immediate - operative exploration and repair
 - Delayed - observe, steroids, eye protection
- CSF leak - conservative management
 - bed rest » lumbar drain
 - >90% resolve in 2 weeks
- Hearing loss
 - Sensorineural - hearing aid
 - Conductive- ossicular reconstruction
- Vertigo - treat symptomatically
 - Meclizine, physical therapy

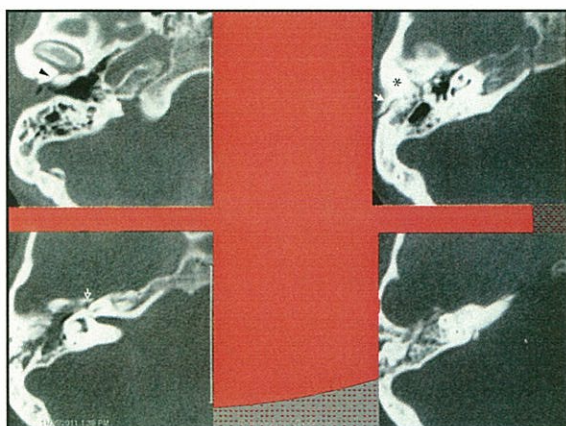
Indications of early otologic intervention

- Meningitis ---> mastoidectomy
- Bleeding sinus --> mastoidectomy --> packing or ligature
- CSF
- Progressive facial axonotmesis --> decompression (neuronography --> > 90% denervation)
- EAM depressed fracture --> reconstruction (2nd atresia)
- Gunshot wounds ---> debridement



Late otologic intervention indications

- Antibiotic-resistant Tr.O.M.
- Chronic Mastoiditis --> Mastoidectomy
- Late facial paralysis --> denervation --> Decompression
- Deafness ---> Tympanoplasty
- post traumatic Cholesteatoma ---> Mastoidectomy, tympanoplasty



Course and Prognosis

(unsatisfactory treatment or missed diagnosis)

T.B. Fracture

Course and Prognosis

Early complications:

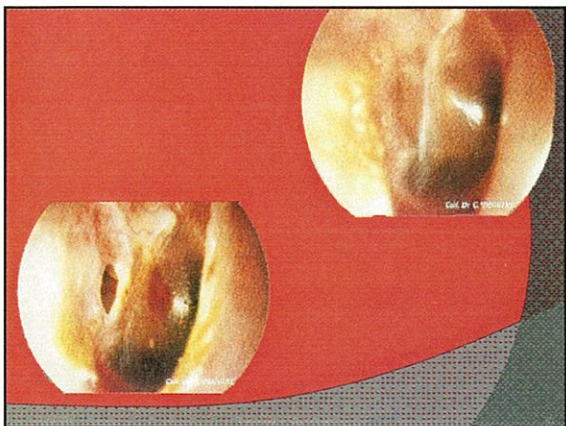
- A.O.M. + Mastoiditis
- ---> subarachnoid space ---> early meningitis or Labyrinthitis ---> meninges

Late complications:

- C.O.M. + Mastoiditis
- Late otogenic meningitis
- Epidural abscess
- Otogenic brain abscess
- Posttraumatic cholesteatoma

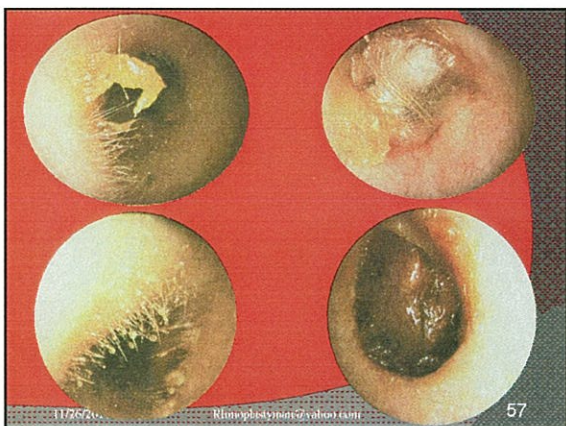
Ear Wax

- The collections of wax & cotton Q-tips
- The content of the wax



Clinical picture:

- yellowish-brown mass
- deafness, roaring noise and dizziness

 Two circular otoscopic views of the ear canal. The top view shows a dark, impacted wax mass. The bottom view shows a similar mass from a different angle.


Impacted Wax

- General practice
- Elderly patients
- Cleaning by cotton swabs
- Hearing loss
- Hard wax → olive oil or sod. Bicarbonate [2-3 wk]
- Rarely an emergency, stages
- Cerumolytics
- syringing

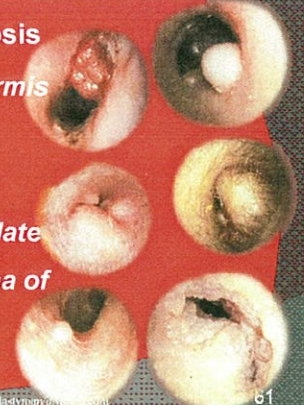
 Two circular otoscopic views of the ear canal. The top view shows a large, dark, impacted wax mass. The bottom view shows a similar mass from a different angle.


EAR WAX

 A collage of images related to ear wax. It includes several otoscopic views of the ear canal showing wax, a small white dish containing a piece of wax, a larger yellowish wax mass, and a diagram of the ear with a red question mark pointing to the ear canal.

Differential diagnosis

- Plug of epidermis
- F. B.
- Dried blood
- Purulent exudate
- Cholesteatoma of the meatus & the middle ear



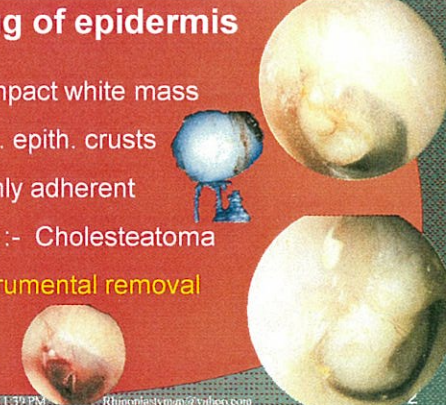
11/26/2011 3:39 PM Rhinoplastyman@yahoo.com 61

A plug of epidermis

Compact white mass
Des. epith. crusts
Firmly adherent

D.D :- Cholesteatoma


Instrumental removal



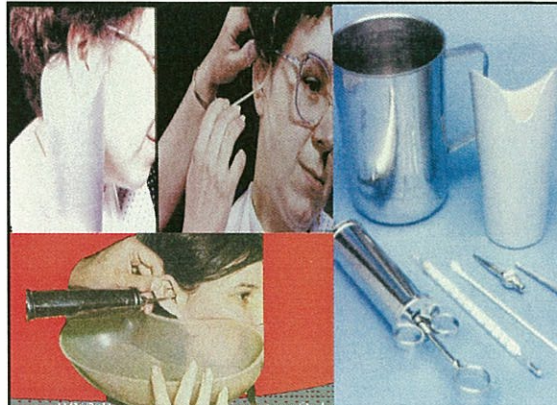
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Treatment

- Ear wash: 37°C, intact TM
Electrically controlled water jets & pressure instead of manual syringes
- Hard wax: 5% sodium bicarbonate , olive oil drops , or 3% H₂O₂ (1W)
- Local steroid or antibiotic creams or eardrops
- Hearing test (medicolegal)



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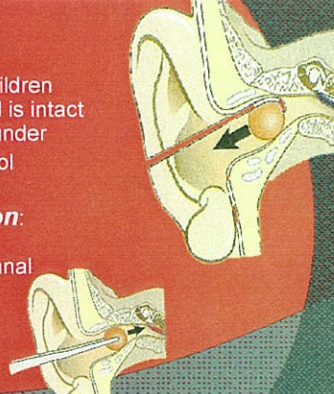
Ear Foreign Bodies

- Careful otoscopy
- The object & length of time
– Careful history (nature)
- Otagia & discharge
- Scratching or stinging the canal or TM by Insects
- Physical pain or bleeding or hearing loss



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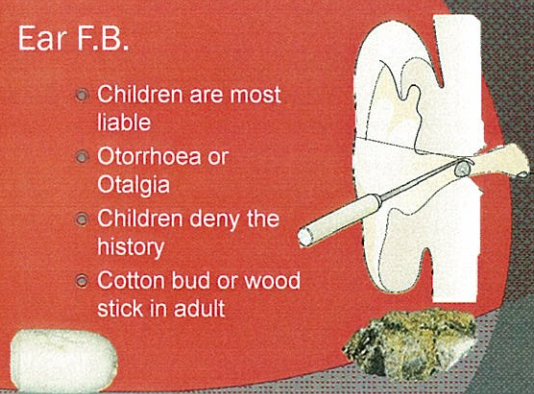
- GA in small children
- Syringing if TM is intact
- Using a hook under otoscopic control
- **Complication:**
TM perforation
Injury to facial canal
Dislocation of the ossicles



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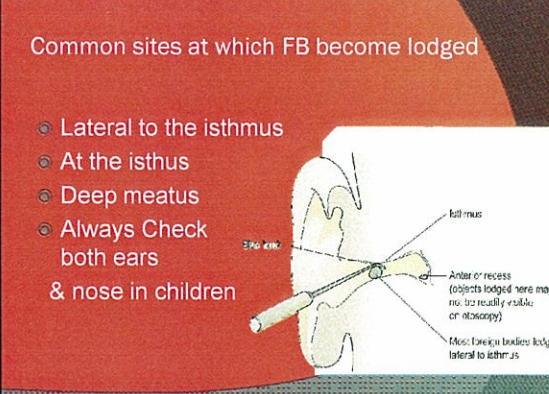
Ear F.B.

- Children are most liable
- Otorrhoea or Otagia
- Children deny the history
- Cotton bud or wood stick in adult




Common sites at which FB become lodged

- Lateral to the isthmus
- At the isthmus
- Deep meatus
- Always Check both ears & nose in children



Removal of FB. requirement

- Clinician Skill
- Instruments
- Optimal lighting
- Referred to a specialist
- Repeated attempts
- GA is safer
- Trauma to the EAM & TM

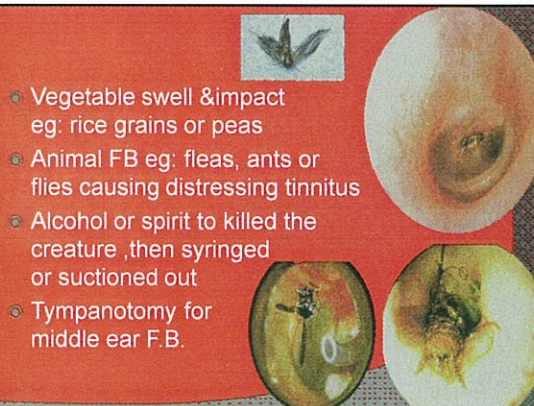


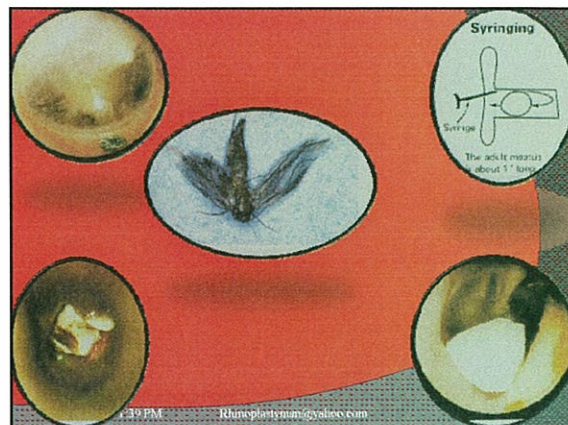
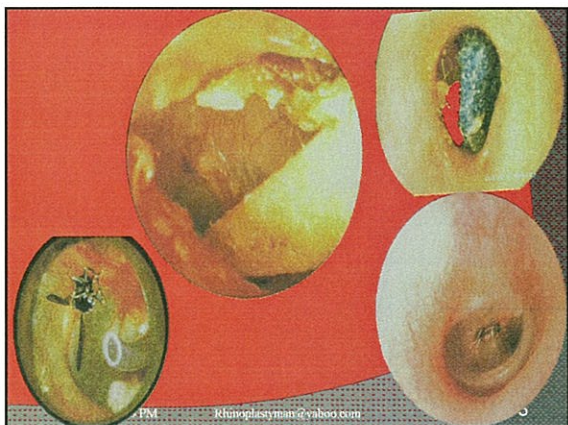
FB Removal

- The Type & Location
- Crocodile forceps : (cotton wool, paper, & foam sponge) not smooth round objects
- Blunt hook
- Suction apparatus eg. (cosmetic beads)
- Non-vegetable FB



- Vegetable swell & impact eg: rice grains or peas
- Animal FB eg: fleas, ants or flies causing distressing tinnitus
- Alcohol or spirit to killed the creature ,then syringed or suctioned out
- Tympanotomy for middle ear F.B.



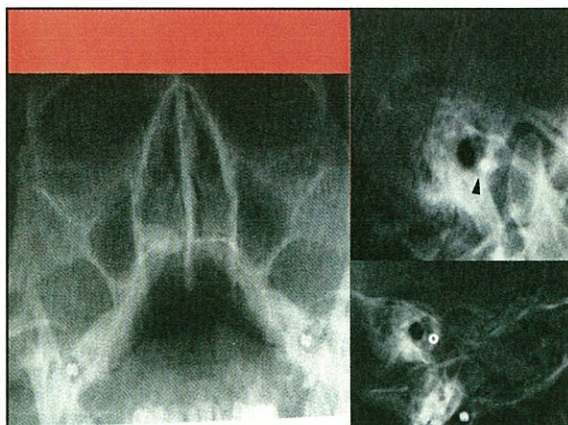
Key Point

⊙ Syringing is contraindicated following recent injury or ear surgery and in patients with a history of perforation of the eardrum.

Two circular images showing ear canals with perforated eardrums. The left image shows a large hole in the eardrum. The right image shows a smaller hole in the eardrum.

Otological trauma and foreign bodies


- An auricular haematoma or suspected perichondritis requires urgent treatment to avoid a long-term cosmetic defect.
- Head injuries without a fracture can produce severe cochleovestibular symptoms.
- Avoid medical litigation by preoperatively informing patients undergoing ear operations of potential risks to the hearing, balance and facial movement.
- Most foreign bodies lodged in the ear canal are asymptomatic.
- Attempt removal only if you have the skills and instruments.
- It is frequently safer to remove foreign bodies in children under general anaesthesia.
- Do not use forceps to extract smooth round objects.
- Do not syringe out vegetable foreign bodies as they will swell and impact in the ear canal.



Trauma to the Nose

A man holding his nose with a bandage. In the background, there is a large, modern building that appears to be damaged or under construction.


- In contact sports & fights
- Depressed or deviated NB
- Nonaccidental injury
- Simple or Compound



11/26/2011 11:39:42
PM Professor Sameer Badajoch

Clinical Presentaion

- Deformity, Obstruction & bleeding
- The deformity is obvious
- Careful palpation
- Nasal cavity examination
- Radiography



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PM Professor Sameer R


Treatment

- Reduction of NF
- Disimpacted bony fragments
- Swinging, reduces the fracture
- Depressed NB is lifted
- External cast

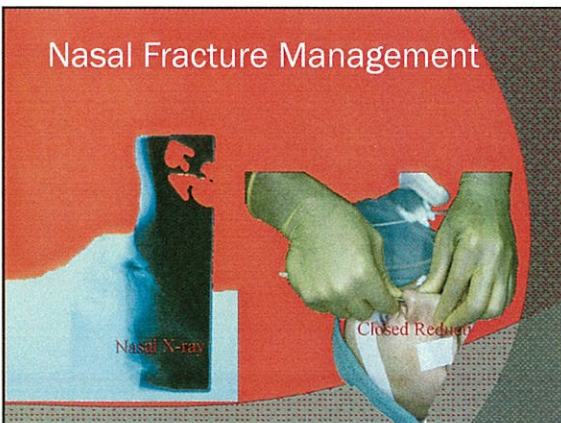
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Nasal Fracture

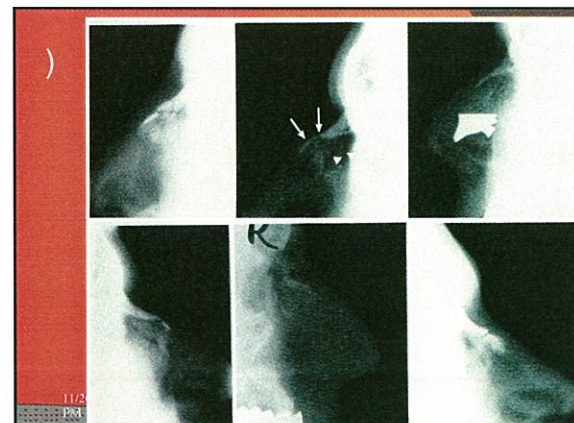
- Very common
 - Most common facial fracture
 - 3rd most fractured bone
- High index of suspicion for fracture
 - Mechanism, change in appearance
 - Epistaxis, nasal obstruction
- Examine and palpate nose carefully
 - Instability, mobility, crepitation
 - Lacerations, septal hematoma
- Nasal x-rays - variable reliability
- Early ENT referral (<5 days)
 - Closed/ open reduction - early
 - Septorhinoplasty - late



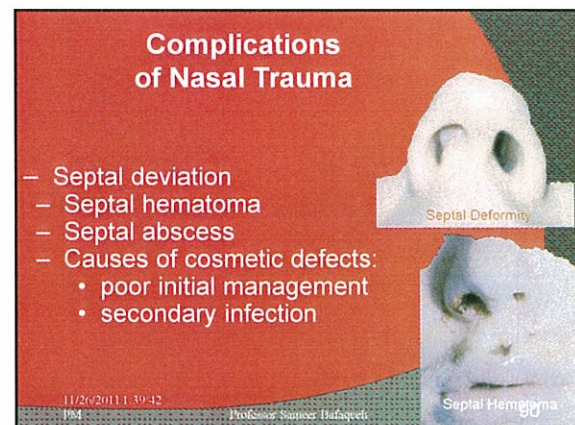
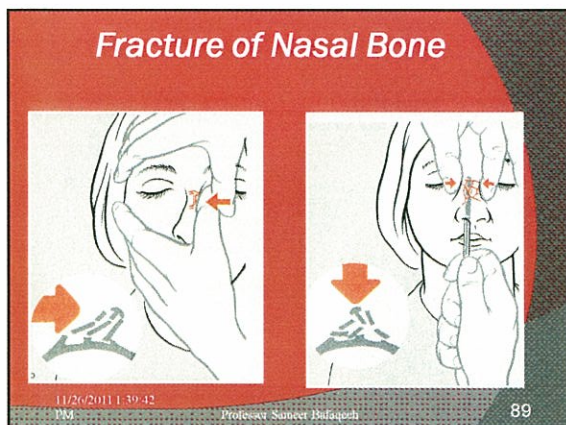
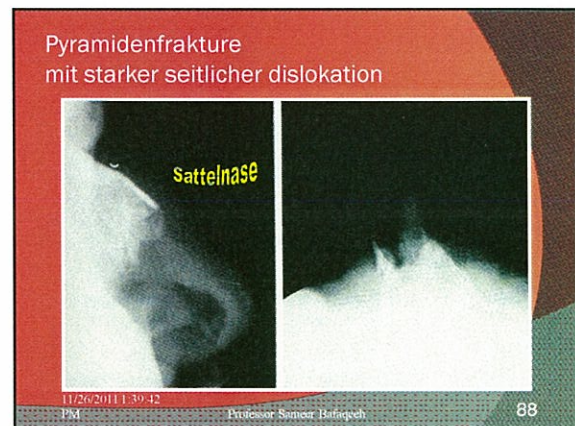
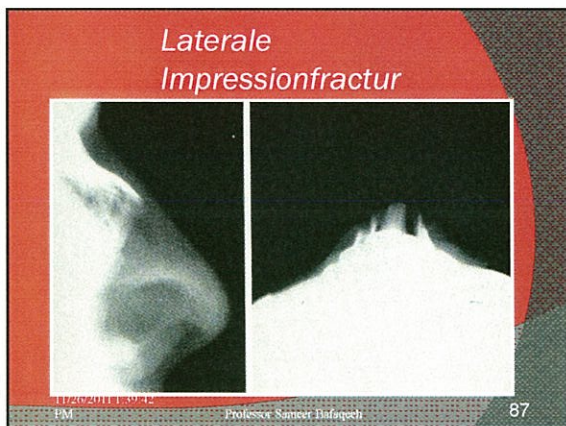
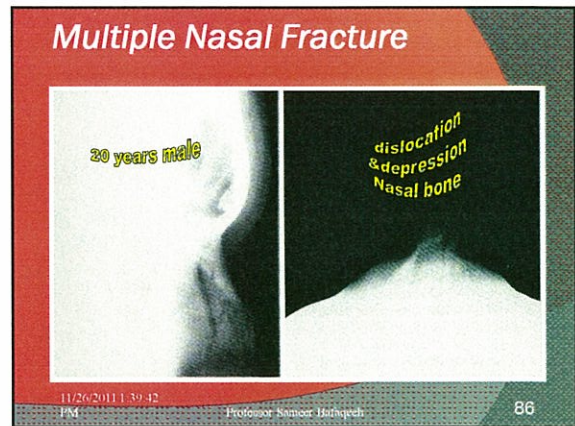
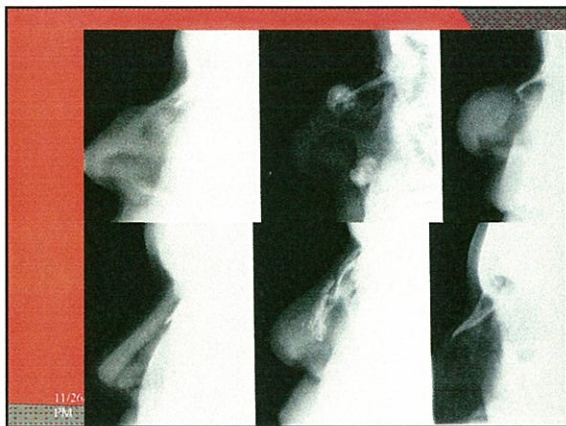
Nasal Fracture Management

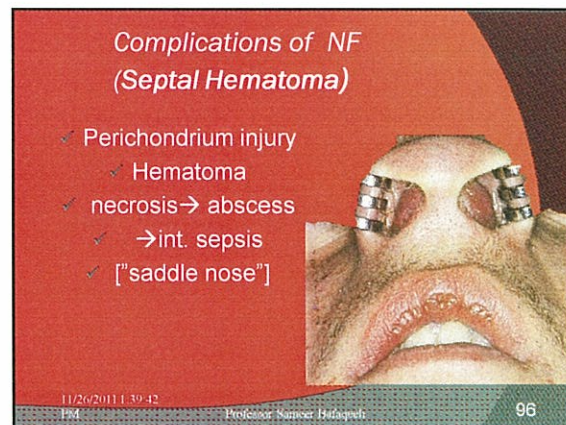
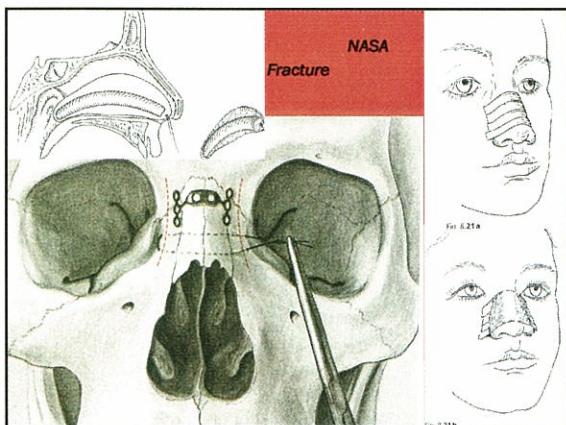
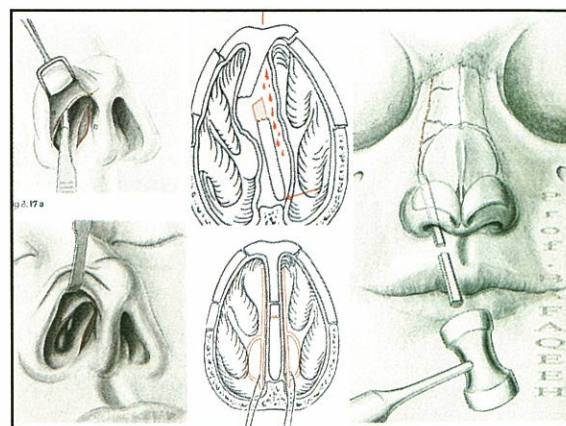
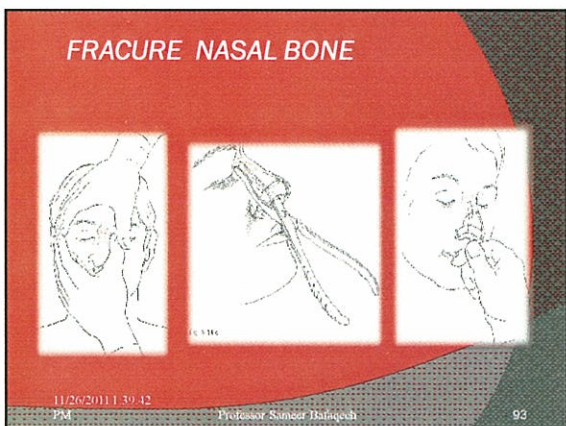
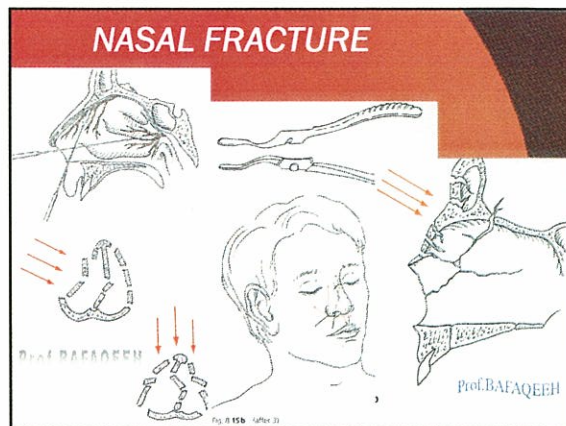
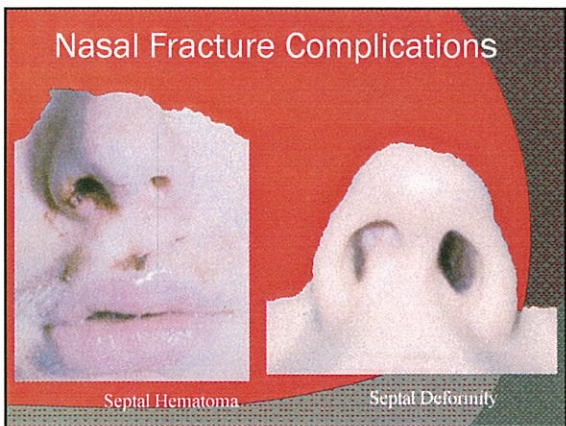


Nasal X-ray
Closed Reduction



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PM






(Septal Hematoma)

Examination:

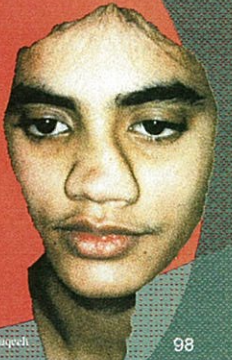
- ✓ Thin, firm & swollen septum
- ✓ Fluctuant swelling
- ✓ Nasal obstruction
- ✓ Urgent drainage
- ✓ Firm N packing



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Complication of NF DS & Nasal deformity

- ⦿ DS : "Springiness"
- ⦿ Elective or acutely septoplasty
- ⦿ Difficult 2nd procedures



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Key Points in NF

1. In a patient with a nasal injury, always examine inside the nose to exclude a septal hematoma. If present, a septal hematoma needs urgent treatment.
2. Nasal fractures may be reduced immediately or after 7-10 days.
3. Adequate initial treatment of fractures will remove the need for difficult reconstructive procedures later.
4. A concomitant fracture of the facial skeleton (eg, of the zygoma) should always be excluded.
5. X-rays of the nasal bones are not necessary in the management of isolated nasal fractures.

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Foreign Bodies in the Nose

- ⦿ Usually found in children
- ⦿ Beads, coins, peas, pieces of rubber, paper, metal fragments...

Symptoms:

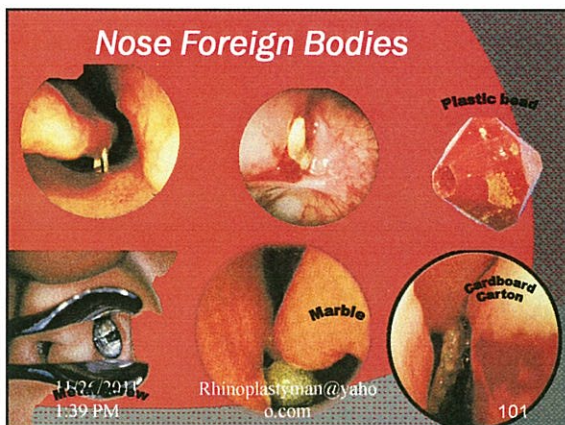
- unilateral nasal obstruction
- unilateral purulent discharge

RHINOLITH [ca]



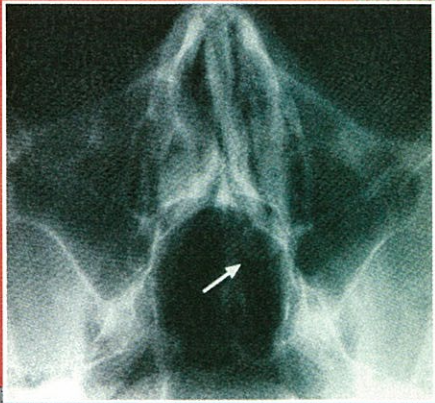
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Nose Foreign Bodies

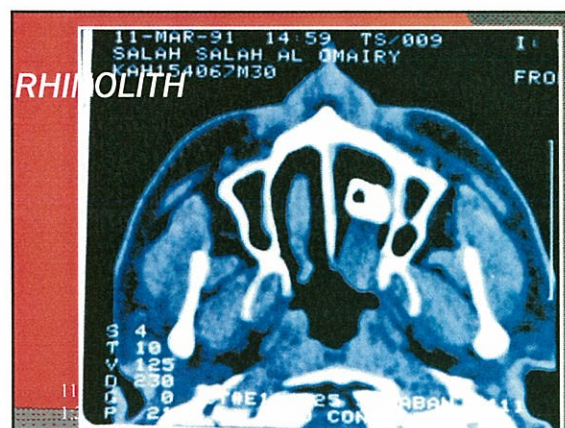
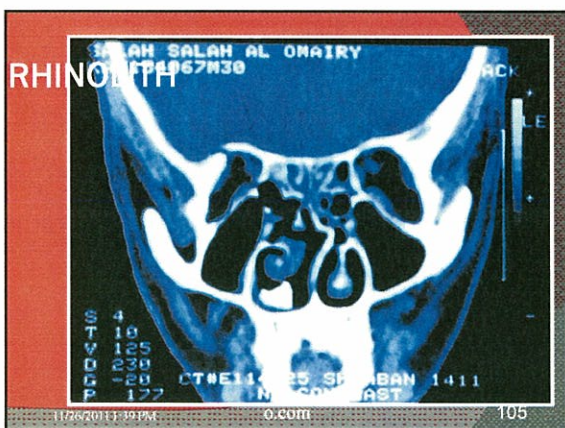
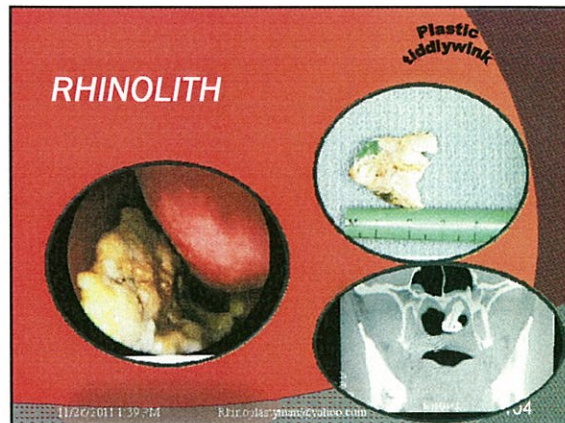


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FB

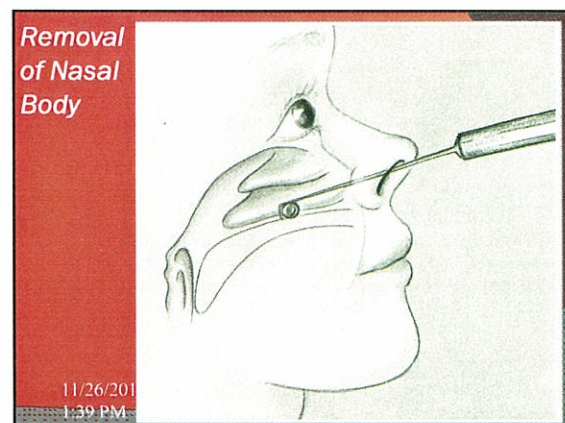


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Foreign Bodies in the Nose

- Diagnosis:
 - anterior rhinoscopy
 - radiology
 - speculum of a fiberoptic auriscope
- Treatment:
 - removal inst.
 - By probe and tipping
 - Under GA



Key Point :

Unilateral,
Offensive,
Purulent nasal
discharge
in a child is usually
due to
Foreign Body.

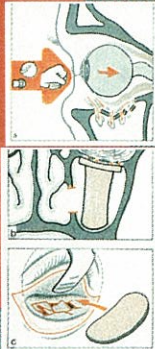


Nasal Foreign Body

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Isolated Blowout Fracture


- Localized violence --> Orbital contents
- A blow (a fist, a tennis ball, a sq. ball, a champagne bottle cork, etc)
- Fractures of the orbital bony floor
- Trapping of the orbital contents



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Blowout Fracture Symptoms

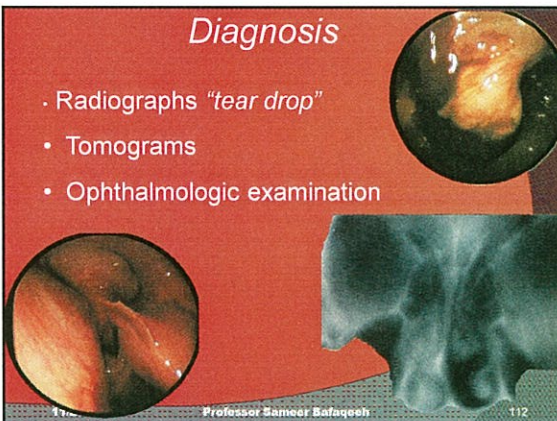
- Enophthalmos
- Double vision
- Limitation of eye movement
- Infraorbital nerve sensation disorders



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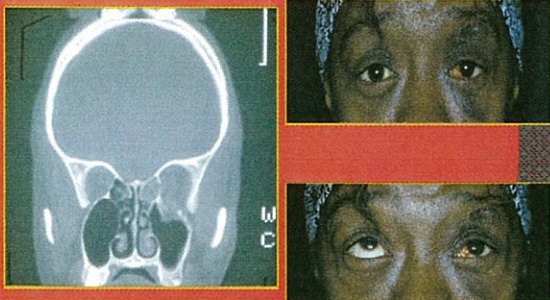
Diagnosis

- Radiographs "tear drop"
- Tomograms
- Ophthalmologic examination




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Orbital Floor Fracture Evaluation

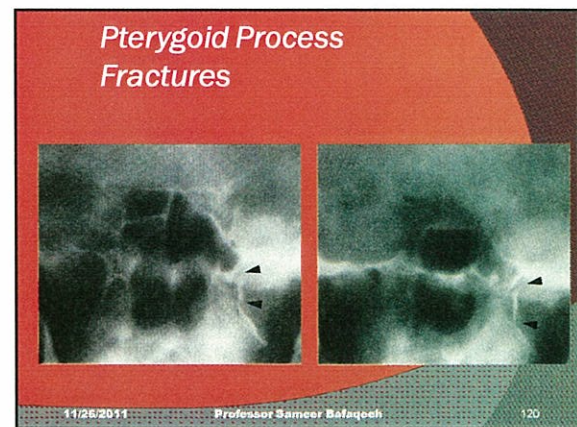
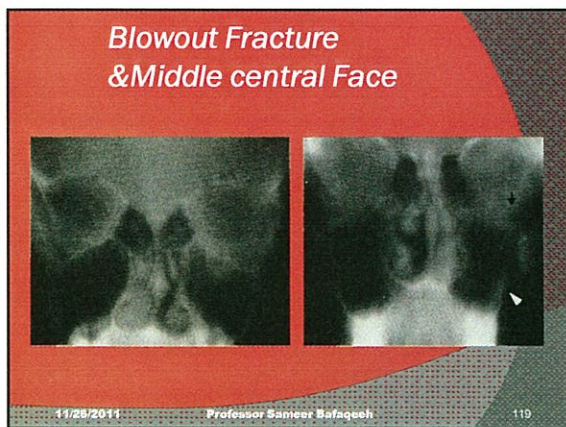
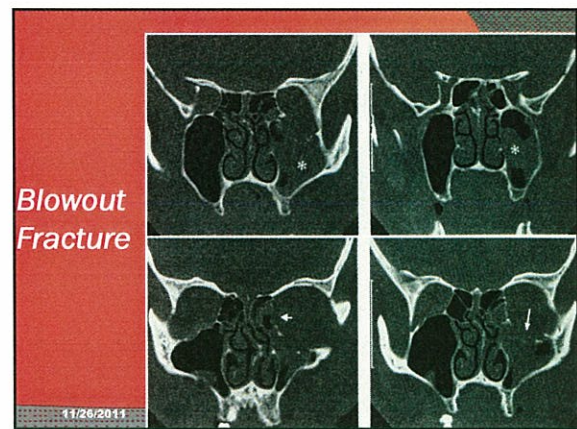
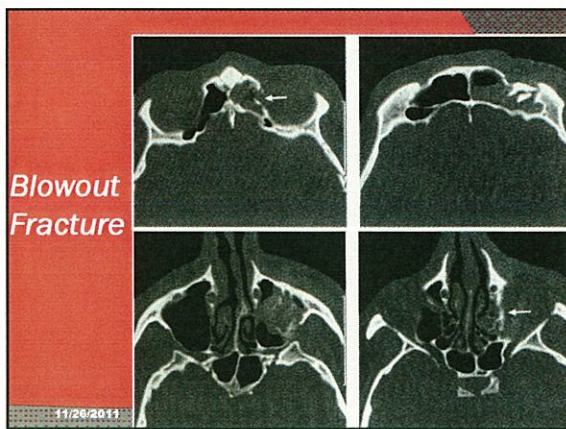
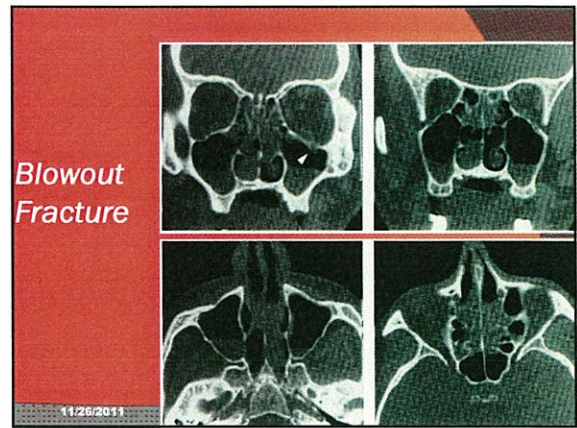
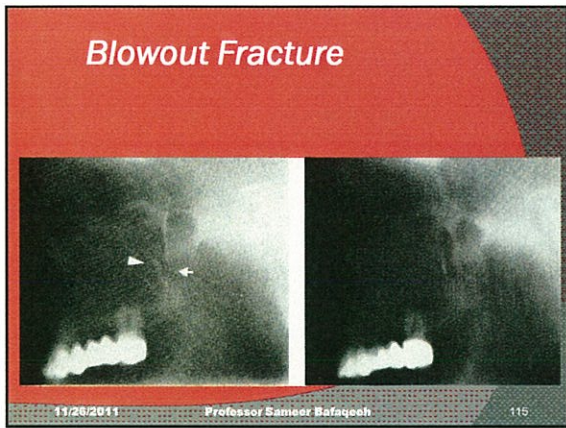


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Blow-out-Fractre



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Blowout Fracture Treatment

- *The antral cavity must be explored:*
 - The bony fragments are exposed
 - The prolapsed part is replaced
 - Bridging or stabilization
(Lyophilized dura, cartilage or plastic prop)
- *Alternative or supplementary measures:*
 - Orbital access
 - Lyophilized dura, silicone sheet, or teflon
 - Autologous implant to correct enophthalmos

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Key Points:

1. In orbital trauma, check the eye movements, palpate the bony orbital rim, and record visual acuity.
2. In patients with facial injury, always check the full range of jaw movements and determine whether or not the upper jaw is mobile. Fractures of the cheek bone (zygoma) are often overlooked.
3. Wear eye protection while playing racquet sports.

