

***Impacted Cerumen**

**--- Triethanolamine
polypeptide oleate in propylene glycol**

**--- 6.5% carbamide peroxide
in anhydrous glycerol**

*** Perichondritis and Chondritis of Auricle**

Tx :open drainage + antibiotics

*** Relapsing and Polychondritis**

Tx : prednisolone

*** Pruritus of External Canal**

Dermatosis or Neurogenic or Infection

Tx : Sedatives (valium) / Corticosteroid

*** Acute External Otitis (pH=6.0 , no pathologic organisms)**

-- Bacterial causes : gram-negative infection (pseudomonas)

Tx : Cleansing the canal

- irrigating solution

- analgesia - culture

Note : Neomycin may cause local allergic reaction

*** Chronic External Otitis**

Tx: Steroid cream / Mild exfoliating agents

Antibiotics is almost of no use

*** Bullous Myringitis (Mycoplasma Pneumoniae)**

Tx :Tetracycline or Erythromycin

*** Serous Otitis Media**

→ Antihistamine

*** Acute Suppurative Otitis Media**

- H. Influenza →ampicillin

- Beta hemolytic streptococcus → penicillin

*** Chronic Suppurative Otitis Media**

→ 2.5% acetic acid soln. Irrigation

→ Antibiotics (Culture)

Ototoxicity :

drugs affect either or both cochlea and vestibule

salicylate toxicity ---- reversible

other agents listed --- irreversible

S/S of Ototoxicity :

*** Tinnitus (high-pitched , continuous)**

*** SNHL : high frequency / recruitment (+)**

*** Dysequilibrium : bobbing oscillopsia**

(inability to focus sharply,distant object appear to jump about on sudden head and body movement)

Pharmacokinetics of Ototoxicity:

--- aminoglycoside(AG) interact with polyphosphoinositides of the cellular membrane

--- increase the membrane permeability

--- AG-lipid complex occupy the binding site for Ca^{++}

--- the phosphorylation-dephosphorylation cycle was blocked

--- disturbed cellular membrane function

--- cell death

Ototoxic Drugs :

Gentamycin

Kanamycin

Neomycin

Barbiturates

Furosemide (lasix)

Phenothiazines

Ethacrynic Acid Phenylbutazone

Estrogen

口服避孕藥

Chloroquine

CNS 抑制劑

Dihydrostreptomycin

Antihypertensives

Estrogen

Predisposing Factors to Aminoglycosides Intoxication [Jackson (1976)]:

- * Renal failure
- * High serum antibiotic level (over 12 μg / ml)
- * high total antibiotic dosage (gentamycin over 1 gram)
- * age over 60 y/o
- * hyperthermia
- * Bacteraemia

Aminoglycosides have variable cochleotoxicity and vestibulotoxicity.

Streptomycin and gentamicin are primarily vestibulotoxic

Amikacin, neomycin, dihydrostreptomycin, and kanamycin are cochleotoxic

Aminoglycoside toxicity primarily targets renal and cochleovestibular systems

Ménière's Disease

- 1861 Ménière
- Endolymphatic Hydrops
- * hearing loss + vertigo
+ tinnitus
- * duration : 20 min - 24 hr
- * recruitment (+)
- * caloric test : 60 % abnormal
- * endolymphatic hydrops

- Low salt diet (Furstenberg)
(not over 3-4 gm)
- Diuretics (thiazide)
- Vasodilator
- Dextran
- 0.5 - 0.7% NaHCO₃
(↑CO₂ ; ↓ vasospasm)
- Ototoxic medicine
(aminoglycide)
- S/S Treatment
- * restricted water
- * no restriction to
protein, fat, CHO
- * do not eat :
胡蘿蔔
葡萄乾
波菜
煙

Sudden Hearing Loss

- * **30-40 % virus & Vascular (mumps, measles, rubella)**
- * **rappid onset**
- * **pain of pressure feeling**
- * **Tinnus: favourable prognostic sign**
- * **vertigo: poor prognostic sign**
- * **4 % : bilateral**

PTA:

**upward-sloping audiogram:
⇒ good recovery**

**downward-sloping:
⇒ poor recovery**

Treatment:

- * **Complete bed rest**
- * **Large dose steroid**
- * **Carbogen (5% CO₂ + 90% O₂)**
- * **Anticoagulants**
- * **Vasodilator**
- * **Dextran**
- * **Satellite ganglion block**
- * **Hyperbaric oxygen**
- **Systemic evaluation**
 - * **steroids**
 - * **hypocoagulation**

Autoimmune Sensorineural Hearing Loss

- * 1979 McCabe : cochlear AIHL**
- 1986 Hughes : vestibular AIHL**
- * Allergen : Type II collagen of cochlea**
- * Same antigenicity as renal glomerulus**
- * Pathology : immune complex deposits
in the cochlear arteriolar wall**
- * M : F = 1 : 2**
- * Bilateral progressive SNHL**
- * Tx : Steroid**
 - 86 % auditory improvement**
 - 69 % vestibular improvement**

Labyrinthitis

1). Bacterial (pneumococci, streptococci, H. influenza)

--- acute or toxic (serous)

--- acute suppurative

--- chronic suppurative

--- fibrous

2). Virus (influenza virus, mumps, adenovirus)

*** vertigo**

vomiting

hearing loss

infected S/S

Cupulolithiasis

(Benign Paroxysmal Positional Vertigo; BPPV)

*** Dislodged otoconia from utricular macula**

*** Posterior SCC**

*** Vertigo (less than 40 sec)**

*** Due to trauma**

*** Cawthorne-Hallpike**

*** Singular neurectomy**

Tinnitus :

- vasodilators - sedatives -

- muscle relaxants - valium -

Epistaxis :

(Kiessalbach's area)

(Little's Area)

- Epinephrine 1:1000
- Silver nitrate
- Trichloroacetic acid
- Oxytetracycline oinment
(packing)
- Thrombin powder
(1000-2000 U/L)
- Gelfoam packing
- Surgicelle packing
- Electric fulguratio
- Ligation of internal
maxillary artery

Allergic Rhinitis

Vasomotor Rhinitis

- nasal douche
- atomizer
- irrigation
- antihistamine
- steroids
- decongestants

**Intranasal nasal vasoconstrictor
vs rhinitis medicantosa**

Paranasal Sinusitis

Virus :

**Rhinovirus ,
Parainfluenza
ECHO virus , Coxsackie virus**

Bacteria (2nd infection) :

**α -hemolytic streptococcus
H. influenza
Pneumococcus
Anaerobic bacteria**

Treatment:

**Amoxil
-- H. influenza ,
Streptococcus ,
Staphylococcus
Bactrium
-- Staphylococcus**

Oral Cleasing Measures

- Alkaline aromatic soln
for oropharynx & nose**
- Antiseptic soln**
- Hydrogen peroxide soln:
3% for wound
1.5% for oropharynx
(for thick mucoid or mucopus)**
- Sodium perborate**
- Zinc chloride**
- Potassium iodide (Lugal's soln)**
- Mandel's soln**

Cough

- **Humidification**
- **Antitussive agents**

-Peripheral Acting Antitussives:

Ammonium Chloride (expectorant) :

- gastric mucosa
- ⇒ ↑ mucinous gland secretion

Benzonatate:

- inhibits Hering-Breuer's cough reflex through vagus n.
- inhibits the cough reflex of medulla
- * nasal congestion

Calcium Iodide & Potassium Iodide :
mechanism unknown

Central Acting Antitussives :

Carbetapentane (Toclase)

--(nonproductive cough)

Codeine

-- medullary cough center
(but ↑ mucoid concentration)

* acute intoxication :

respiratory suppression

Tx : naloxone (Narcan)

Dextromethorphan

* **Psychogenic cough**

(severe dry cough)

-- hypnotic

**Vincent Angina
(necrotizing
ulcerative gingivitis)**

**-- Spirochete &
fusiform bacillus**

**Phenol then
95% alcohol
Sodium perborate or
Gly-oxide AgNO₃ soln**

Inflammatory Conditions

*** Aphthous Stomatitis (Canker sores)**

Symptomatic therapy

Corticosteroid cream (Kenalog; Dexaltin)

*** Pharyngitis Sicca**

50% KI (10 drops in milk / bid - tid)

0.3 ml SSKI in H₂O tid

*** Acute Laryngitis (bacteria) :**

--Children :

Haemophilus organism

--Adults :

Streptococcus

*** Acute Epiglottitis :**

--Haemophilus Influenza

**→ Ampicillin then according
to culture results**

→ Acetylcysteine

*** Bacterial Infections**

Acute tonsillitis

Peritonsillar abscess

Pharyngeal space infection

**Gr.A β hemolytic
streptococcus**

Penicillin or

Erythromycin

***Herpangina**

**coxsackieviruses or
enteroviruses**

Tx:

**plenty of fluids,
relieving their pain,
and treating their other symptoms**

***Oral Herpes**

**Penciclovir 1% cream (Denavir)
every 2 hours for 4 days**

Zovirax (Acyclovir)

Famciclovir (Famvir, Novartis)

Valacyclovir (Valtrex)

***Hand-foot-mouth disease :
caused by Coxsackievirus**

Treatment :

Acetaminophen

Topical anesthetic agents

Non-irritating diet

Increased fluid intake

Salivary Glands:

Acute Sialadenitis

**Penicillin-resistant
coagulase-positive
staphylococcus**

**Cephalocin or
Methicillin then
according to
culture result**

Acute Tonsillitis

**Peritonsillar Abscess
(Quinsy)**

**Pharyngeal Space
Infection**

**Ludwig's Angina
(submandibular space)**

Tongue

Hairy tongue (lingua nigra)

**Suspect mycotic infection or
hypopharyngeal carcinoma**

→ Stop all antibiotics

**→ Local Tx by 10%
carbamide Peroxide
(Gly-oxide) soln**

Geographic tongue (migratory glossitis)

Median Rhomboid glossitis

No need for treatment

Burn of the Respiratory Tract

- Humidified oxygen +**
- Diphenhydramine +**
- Bronchodilator +**
- Prednisolone +**
- Antibiotics +**
- Diuretics +**
- Tranquilizer +**
-

Acute Edema of the Laryngopharynx (allergic reaction)

**0.5 cc 1:1000 Ephedrine sc
(0.2-0.4 cc epinephrine iv)**

Antihistamin :
iv 10-50 mg diphenhydramine

Steroid :
4-20 mg dexamethasone (Decadron)

Pharyngitis Sicca

50% KI (in milk ; bid - tid)

0.3 ml SSKI (in Water tid)

Ammonium chloride (3-5 gm tid)

Mandel's Soln

Mycotic Infections

Thrush

Candida Albicans

**--- Nystatin (Mycostatin) suspension
(100000 units/ml)**

**1 ml in oral cavity for 5 min (local only)
quit other antibiotics**

--- Gentian violet - local apply

Nebulizer :

nasal cavity, pharynx, larynx
= 10-15 μm in \emptyset :

paranasal sinuses
= 3-10 μm in \emptyset

lower respiratory tract
= 1-10 μm in \emptyset

*** ultrasonic nebulizer**
= 5 μm in \emptyset

*** nebulizer**
= over 10 μm in \emptyset