Supportive treatment:-

- Anti-inflammatory
  - NSAIDS
  - Corticosteroid cautionsly in severe inflammatory reaction
- Anticongestant
  - Could be used to relief congestion
  - xylomethazoline
  - pseudoephedrine
- Antipyretics
  - paracetamol
  - acetomenphen

Specific treatment

*Antibacterial drug:-

selected according to:-

1. age
2. organism
3. Site of inf.
4. Complications
5. hist. of allergy to drug.

treatment of:-

- Acute bacterial Sinusitis

- amoxicillin
  - amoxicillin-clavulanic acid
- ceftriaxone
  - cefdinir
- trimethoprim-Sulfamethoxazole

- acute otitis media

- Surgical drainage
- Supportive treatment
- antibacterial drug
  - amoxicillin (in high dose → because not much blood reach ear)
    - amoxicillin-clavulanic acid
  - azithromycin
    clarithromycin
    (if penicillin resistance occur)
  - ceftriaxone
    cefuroxime

URI

Upper Respiratory tract infec

- pharyngitis & tonsilitis

Eradication of B hemolytic Streptococci is necessary to avoid rehumatic fever

→ anti bacterial drugs

penicillins
- G (parenteral)
- V (oral)

long acting Penicillin G can eradicate the infection..

oral cephalosporins (cephalexin)

Macrolides (azithromycin, erythromycin)

acute bronchitis

- antibacterial drug: Amoxicillin
  - used for mild cases which doesn't need hospitalization
- trimethoprim-Sulphamethoxazole
- Macrolides
- tetracylines
  - effective against: Mycoplasma, Chlamydia, B.Pertussis
- Expectorants
- Mucolytics
- in Resistant cases
  - Culture
  - sensitivity

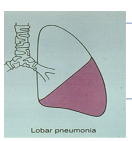
LRTI

pneumonia

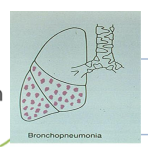
pathology:-

Types of pneumonia

Lobar Pneumonia: Lobar pneumonia affects one or more lobes of a lung. It often presents with distinct consolidation of lung tissue in a specific areas, resulting in symptoms like high fever, chest pain, and cough which may be productive.



Bronchopneumonia (lobular): is characterized by the inflammation and infection of lung tissues including small airways and bronchioles. It often appears as patchy infiltrates on a chest X-ray and may result from various causative agents.



Typical pneumonia usually appears as lobar pneumonia on x-ray, while atypical pneumonia tends to appear as interstitial pneumonia (bronchopneumonia). However, the **underlying pathogen cannot be conclusively identified based on imaging results alone.**

- **Community-Acquired Pneumonia (CAP):** CAP is contracted in non-healthcare settings, such as the community, at home, or in public places. Streptococcus pneumonia is a common cause of CAP, but the specific causative agent may vary depending on factors like age and underlying health conditions.

- **Hospital-Acquired Pneumonia (HAP):** HAP is acquired during a hospital stay (> 48 h). Patients in intensive care units (ICUs) or those on mechanical ventilation (ventilator related pneumonia) are at higher risk. HAP is often caused by drug-resistant bacteria.

treatment of pneumonia

Empiric treatment

[1] typical & lobar pneumonia are sensitive to β-lactam antibacterial drugs (penicillins & Cephalosporin)

- penicillin V ± (amoxicillin or amoxicill-clavulanate) used orally
- ceftriaxone → used injection

[2] Bronchopneumonia (atypical pneumonia) caused by → Mycoplasma pneumonia, chlamydia, legionella

- treated by → macrolides (azithromycin), tobracycline, Fluroquinolones

[3] if gram -ve organism

treated by → aminoglycoside, ciprofloxacin

Community acquired pneumonia

- oral amoxicillin or IV penicillin G
- macrolides (azithromycin) for penicillin allergic patients

*For resistant cases

combination between β-lactam + macrolide or fluoroquinolone (levofloxacin)

hospital acquired pneumonia

Causative organism (MRSA) or gram -ve

if MRSA → vancomycin or linezolid

if G-ve → Gentamicin, ceftazidime, Imipenem-cilastatin, Ciprofloxacin

if G-ve → Gentamicin, ceftazidime, Imipenem-cilastatin, Ciprofloxacin

Aspiration pneumonia

anaerobic + G-ve organism

for anaerobes
- Clindamycin ±ve
- penicillin +ve
- Metronidazole -v

- Fluoroquinolones should be avoided for patients younger than 18 years and during pregnancy.
- Testing for hypersensitivity to beta lactams necessary (to avoid anaphylaxis) especially before injecting penicillin G and third generation cephalosporins
- Both aminoglycosides and cephalosporins have a potential nephrotoxicity. Dose adjustment is needed in renal impairment.
- Macrolides (erythromycin) inhibits CYP450 and cause drug interactions.
- Clavulanic acid is hepatotoxic.
- The risk of arrhythmia with some quinolones could be hazardous to cardiac patients

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treatment of Viral respiratory tract inf.

- Antipyretics & Anti-inflammatory
- inhaled ribavirine → in case of severe RS syncytial Virus related Bronchiolitis in hospitalized children
- zanamivir & oseltmivir → used in severe influenza viral inf.