**PNEUMONIA**

Pneumonia is defined as an inflammation of the substance of the lungs and is usually caused by bacteria. In about 25% of patients no organism is isolated. Pneumonia may also result from chemical causes (e.g. aspiration of vomit) and radiotherapy.

**Clinical features**

Most commonly there is fever, combined with sputum production, pleurisy and dyspnea. Patients have poor appetite and a headache. Hemoptysis occasionally occurs and there may be a pleural effusion.

**The etiology of pneumonia**

The most common organism is *Streptococcus pneumoniae*. *Haemophilus influenza* should be considered in elderly patients, while *Mycoplasma* and *Chlamydia pneumoniae* are more often seen in the young. Recent influenza may predispose to *Staph. aureus*.

**Investigations**

1. Chest X-ray confirms the area of infection. The chest X-ray is repeated  
   more frequently if the acute illness is not responding to treatment.
2. Sputum for Gram stain, culture and sensitivity tests.
3. Blood tests: A white cell count above 15 × 109/L suggests bacterial infection.

**Management**

1. Antibiotics are prescribed on the basis of Gram stain results. If possible, take blood cultures prior to starting antibiotics:
   1. Amoxicillin 500 mg 3 times daily orally for 7–10 days
   2. If penicillin allergy, clarithromycin 500 mg twice daily or erythromycin 500 mg 4 times daily
   3. Fluoroquinolones, e.g. ciproflxacin, are recommended for those intolerant of penicillins or clarithromycin and erythromycin.
   4. Metronidazole is added in patients at risk of anaerobic infection.
2. Supportive treatment includes hydration, antipyretics, antitussive medications, antihistamines, or nasal decongestants.
3. Oxygen therapy is given for hypoxemia.
4. Respiratory support includes high inspiratory oxygen concentrations, endotracheal intubation, and mechanical ventilation.

**Complications**

1. Parapneumonic effusion (Pleural effusions): It is a common complication of bacterial pneumonia (about 40%). Most parapneumonic effusions are small and resolve with appropriate antibiotic therapy.
2. Lung abscess: an area of necrosis forms in the lung parenchyma.
3. Empyema: is defined as pus in the pleural space.