medpath

Pneumonia

Pathophysiology

- An infection of the lung parenchyma. Usually the epiglottis, cough reflex, mucous membranes and bronchonstriction can protect the lungs form becoming infected, but they can become overwhelmed and allow bacteria and viruses to grow.

Disease Process

Early Symptoms

- Purulent sputum
- Diminished lung sounds
- Fatigue
- Cough
- Sore throat

Late Symptoms

- Chest pain
- Dyspnea
- Tachycardia
- Hemoptysis
- Activity intolerance
- Sepsis
- Respiratory distress

Common Causes

- Abdominal/thoracic surgery
- IV drug use
- Air pollution
- Immunosuppressive disease/meds
- Age of 65+
- Intestinal/gastric feedings via NG tube
- Altered consciousness
- Malnutrition
- Recent antibiotics
- Bed rest/ immobility
- Tracheal intubation
- Smoking
- Chronic disease
- Upper respiratory infection
- Exposure to farm animals
- Diabetes
- Lung cancer
- CKD

Medical Interventions

Labs

- ABG
- CBC and WBC
- Blood cultures
- Sputum culture

Radiology

- Chest x-ray
- Chest CT

Pharmacology

- Antibiotics (macrolides) – bacterial PNA
- Corticosteroids and glucocorticoids

Other Treatment

- O2 therapy
- IV therapy
- Chest physiotherapy
- Suctioning
- Early mobilization

Care Plan

Dx: Impaired Gas exchange r/t fluid and mucous accumulation.

Goal: Improve ventilation and oxygenation of tissues.

Interventions:
- Assess respiratory rate, depth and effort frequently
- Administer oxygen therapy
  - Will help maintain PaO2 levels
- Assess skin color, mucous membranes and nails for cyanosis
  - Cyanosis can be a sign of hypoxemia
- Monitor Arterial blood gases (ABGs) and pulse oximetry
  - Helps alert healthcare team to changes in condition

Dx: Activity intolerance r/t SOB and general fatigue and weakness.

Goal: Regain baseline activity levels without complications.

Interventions:
- Evaluate response to activity
  - Allows you to anticipate the interventions needed
- Assist with ambulation and self care
  - Prevents ehaustion and decreases the likelihood of falls
- Turn and reposition every 2 hrs
  - Prevents complications like pressure ulcers and fluid accumulation
- Group care together
  - Minimizes exhaustion and conserves oxygen
- Ensure pt is receiving adequate rest
  - It is important to rest to promote healing and save energy

Dx: Risk for infection r/t inadequate immune defense.

Goal: Recover from infection without complications.

Interventions:
- Educate patient about importance of clearing secretions
  - Sputum accumulation can cause secondary infection
- Provide health care frequently
  - Keeps bacteria from growing and spreading to lungs
- Ensure pt is practicing good hand hygiene
  - Helps prevent the spread of infection

Nursing Management

Assessment

- Purulent sputum
- Diminished lung sounds
- Fatigue
- Cough
- Sore throatChest pain
- Dyspnea
- Tachycardia
- Hemoptysis
- Activity intolerance
- Sepsis
- Respiratory distress

Labs

- ABGs
- Sputum Culture
- WBCs

Nursing Dx

- Impaired gas exchange
- Ineffective breathing
- Pattern
- Acute pain
- Activity intolerance

- C- Confusion
- U – BUN >20
- R – Respiratory rate ≥30
- B – BP – systolic <90 – diastolic <60
- 65 - ≥ 65 years old

Interventions

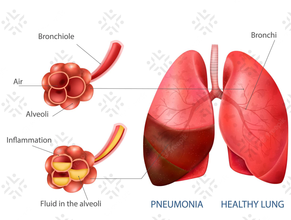
- Teach good handwashing
- Change positions frequently
- Promote expectoration
- Limit visitors to prevent spread of infection
- Encourage adequate rest
- Educate pt to report chest pain, fever, changes in sputum or altered sensorium
- Provide comfort for pain
- Administer antipyretics as ordered
- Continuously monitor pulse oximetry
- Suction secretions as needed
- Encourage early ambulation/ mobilization to speed up recovery

Holistic Care

- Use therapeutic comm. to ease pt's anxiety
- Provide extra pillows/ support to ensure pt is comfortable in bed
- Ensure environment is soothing and clean

Nutritional Considerations

- Fruits and vegetables build immune system
- Protein rich foods – help repair tissue
- Drink plenty of water and fluids to maintain fluid/ electrolyte balance
- Avoid throat irritating foods like milk that can cause excess secretions



Prevention

- Wash hands frequently
- Eat a balance diet
- Get adequate rest
- Exercise regularly
- Cough and sneeze into elbow
- Stop smoking
- Avoid others who are ill