# IN THE NAME OF GOD

## Bronchiolitis

Dr. Farinaz Amirikar

Pediatric pulmonologist

Assistant professor



#### INTRODUCTION

 Bronchiolitis is the most common lower respiratory tract infection in children.

 Bronchiolitis is a seasonal disease, dominating winter months, with a peak over 6 to 8 weeks around the winter.  Approximately 40% of infants are affected by bronchiolitis in the first year of life.

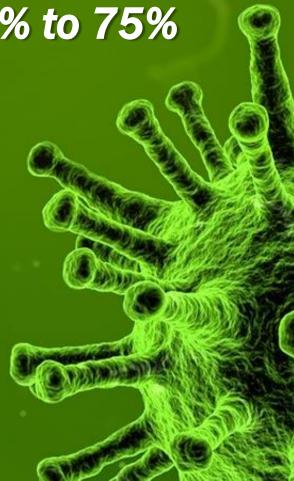
 The majority of cases occur in children under 1 year of age.

 A "classic" case would be an infant aged 3 to 5 months.



### Etiology

- Viral etiology:
- RSV the most common cause reported in 43% to 75%
- Human rhinovirus (18%)
- Influenza
- Coronavirus
- Human metapneumovirus
- Adenovirus
- Parainfluenza virus

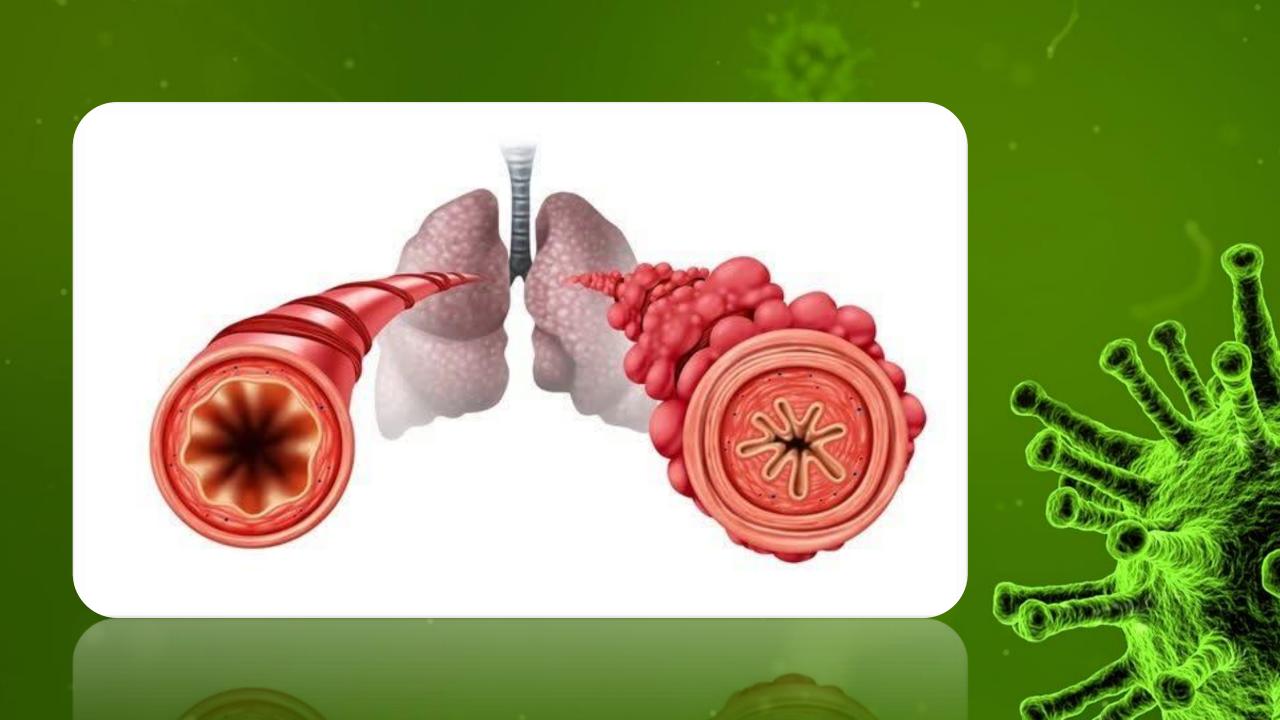


### **Pathogenesis**

• the bronchioles are edematous and blocked by necrotic epithelium and neutrophils, with some mucus binding this debris together.

Ciliary disruption

Peribronchial infiltration



# HIGH-RISK POPULATION FOR BRONCHIOLITIS

- •-preterm
- •-cystic fibrosis
- ·-congenital heart disease
- ·-chronic lung disease
- •-immunodeficiency
- -Down syndrome
- •- cerebral palsy



### **SYMPTOMS**

- Rhinorrhea
- Cough
- Pyrexia
- Declines oral feeding
- Nasal obstruction
- Apnea



#### PHYSICAL FINDINGS

- -Increased respiratory rate
- -Use of accessory muscles
- •- Wheezing
- •-Crackles
- Reduced arterial oxygen saturations
- •-Respiratory rate is a key marker of disease severity, with ≥60/min considered severe and ≥70/ min

#### DISEASE SEVERITY

- •Severe (<93%)
- Very severe <90%
- Inability to feed orally
- Level of consciousness



### IMAGING

Chest radiography atypical:

- •- focal crackles
- •-temperature remaining above 39 °C
- •-respiratory failure



#### Differential diagnosis

- · Asthma
- Pneumonia
- Chronic lung disease
- Foreign body aspiration
- GERD
- · CHD
- Vascular rings



# Management



#### HOSPITALIZATION

- Toxic with poor feeding
- Lethargy
- Apnea
- Hypoxemia
- Dyspnea, cyanosis
- Parent unable to care for child at home

### **Hydration**

The threshold for supporting hydration is typically when an infant's intake is reduced to 50% to 75% of usual volume.

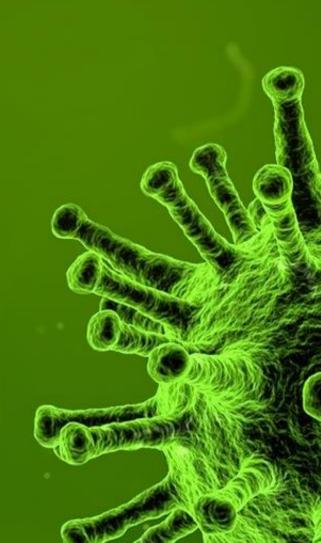


# Oxygen may be used to treat hypoxemia

• HFNC

• CPAP

Intubation



Corticosteriods & bronchodilators & chest physiotherapy NOT recommended

# THE END.

