Acute Bronchiolitis

Bronchiolitis is an acute inflammatory injury of the bronchioles usually by viral infection.
→ Usually more common in Infants.

Etiology → Viruses:
① Respiratory Syncytial Virus (Common)
② Parainfluenza Virus · ③ Adenovirus ④ Rhinovirus
⑤ Coronavirus · ⑥ Paramyxovirus

Risk Factors
+ Age less than 3 months;
- low birth weight, Premature infants.
- Parental smoking. low socioeconomic group.

Pathophysiology
Bronchioles (< 2mm). lack cartilage and submucosal gland containing the alveoli at the end.
↓
Type I hypersensitive reactions (IgE).
↓
Necrosis of Respiratory epithelium
and proliferation of goblet cells; loss of cilia
↓
Type I & Type II alveolar cells are affected
↓ (Squamous) ↓ (Surfactant)
Submucosal edema. (No Bronchoconstriction)
↓
Obstruction to the outflow of air
by necrotic tissue, inflammation & edema
↓ Atelectasis
Air trapping → Ventilation perfusion mismatch

Clinical Features:

Incubation ~ 2 to 5 days.

- Increasing Coryza and congestion.
- Child becoming fussy and difficult to feed.

→ Usually RSV is upper tract, if progress to lower, Cough, dyspnea, wheezing.

→ Fever → 101.5°F.

Examination:

- Tachycardia, Tachypnea (> 60 breath/min).

→ Fine wheezing, Diffuse, Fine rales,

→ Cyanosis appear.

Complication

→ ARDS

→ Bronchiolitis obliterans.

→ Congestive heart failure.

→ Arrhythmia.

DD → Lung & Heart diseases.

Investigations

① Arterial Blood Gas analysis.

② Chest Radiography (CPA view) → Hyperinflation & Atelectasis.

③ Pulse oximetry.

④ & Complete Blood Count → WBC, DLC.

⑤ PCR → Viral testing.

⑥ ECG → arrhythmia.

Treatment

① Maintain Hydration ② Oxygen Supplementation

③ Ventilation Mechanical. ④ Chest physiotherapy.