RAMA UNIVERSITY

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FACULTY OF NURSING

RESPIRATORY DISTRESS IN NEWBORN

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RESPIRATORY DISTRESS SYNDROME

- Respiratory Distress Syndrome (RDS) formerly known as hyaline membrane disease, is a life threatening lung disorder that results from underdeveloped and small alveoli and insufficient level of pulmonary surfactant that leads to atelectasis.
- It is the leading cause of death in preterm infants
- Occurs in 50% babies born at26-28 weeks and 25% of babies born at 30-31 weeks

Etiology/ Causes

RDS occurs as a result of insufficient production of surfactant which is seen in:

- Prematurity (more common)
- Maternal diabetes (Inadequate utilization of glycogen for surfactant production)
- Meconium aspiration syndrome
- Caesarian section (Due to lack of adrenergic and steroid hormones released during labour)
- Pulmonary Causes: Congenital malformation, pneumonia, edema of lungs, bleeding from lungs, pleural effusion
- Non Pulmonary causes: Sepsis, Exposure to cold, acute blood loss.

Clinical Features

A) Initial manifestation

- Tachypnea and labored breathing
- Audible expiratory grunting
- Intercoastal / substernal retractions
- Nasal flaring
- Cyanosis or pallor
- Fine respiratory crackles

B) Manifestations as disease progresses

- Apnea
- Flaccidity
- Unresponsiveness
- Diminished breath sound
- Mottling

DIAGNOSTIC EVALUATION

- History taking
- Physical examination
- Chest X-ray: ground glass appearance
- ABG
- Pulse oxymetry
- Pulmonary function test
- Shake test
- Down’s score

- DOWNE'S SCORE:

Score	0	1	2
Respiration (rate/min)	<60	60-80	>80 or apnea
Cyanosis	Nil in room air	+nt in 40 % oxygen	+nt in >40% oxygen
Retraction	none	Mild	Moderate to severe
Grunting	None	Audible with sthethescope	Audible without stethescope
Air entry	Clear	Delayed or Decreased	Barely audible

Management

➢ ***Medical management***

- Neonates suspected to have RDS need to be treated in NICU
- Administer IV fluids and oxygen, start oxygen therapy 4-5 lit/min
- Maintain oxygen saturation between 90-95%
- Administration exogenous surfactant through ET tube directly into trachea.

Thank you