OPEN ACCESS Freely available online

Pediatrics & Therapeutics

Opinion Article

Neonatal Respiratory Distress Syndrome in Very-Low-Birth-Weight Infants: Causes, Symptoms, and Treatment

Anna Martini*

Department of Women's and Children's Health, University of Milan, Rozzano, Milan, Italy

DESCRIPTION

Neonatal Respiratory Distress Syndrome (NRDS) is a common respiratory condition that affects premature infants, particularly those with Very Low Birth Weight (VLBW). It is a life-threatening condition that requires prompt medical attention. This article will discuss the causes, symptoms, and treatment options for NRDS in VLBW infants.

Causes of NRDS in VLBW infants

NRDS is caused by the immature lungs of premature infants. In premature infants, the lungs may not produce enough surfactant, a substance that helps keep the air sacs in the lungs open. As a result, the air sacs may collapse, making it difficult for the infant to breathe. VLBW infants, who are born weighing less than 1500 grams, are at higher risk of developing NRDS due to their immature lungs.

Other risk factors for NRDS include a family history of respiratory distress syndrome, maternal diabetes, and multiple pregnancies.

Symptoms of NRDS in VLBW infants

The symptoms of NRDS can vary from mild to severe and may include:

- Rapid breathing
- Grunting noises during breathing
- Flaring nostrils during breathing
- Bluish skin color (cyanosis)
- Low oxygen levels

Diagnosis of NRDS in VLBW infants

NRDS is usually diagnosed based on the infant's symptoms and physical examination. A chest X-ray may be done to confirm the diagnosis and rule out other respiratory conditions.

Treatment of NRDS in VLBW infants

The treatment of NRDS in VLBW infants aims to improve breathing and oxygen levels. Treatment options may include:

Surfactant replacement therapy: This involves administering synthetic surfactant to the infant's lungs through a breathing tube. The surfactant helps keep the air sacs open, making it easier for the infant to breathe.

Mechanical ventilation: This involves using a breathing machine to help the infant breathe. The machine delivers oxygen and air to the lungs and can be adjusted to support the infant's breathing efforts.

Continuous Positive Airway Pressure (CPAP): This involves delivering a continuous flow of air and oxygen to the infant's lungs through a mask. CPAP helps keep the air sacs open and can be used as a non-invasive alternative to mechanical ventilation.

Oxygen therapy: This involves providing supplemental oxygen to the infant through a nasal cannula or oxygen hood. Oxygen therapy helps improve oxygen levels and can be used in combination with other treatments.

Monitoring: VLBW infants with NRDS require close monitoring of their breathing, oxygen levels, and other vital signs. Blood tests may also be done to monitor blood gases and electrolyte levels.

Prognosis for NRDS in VLBW infants

The prognosis for NRDS in VLBW infants depends on the severity of the condition and the infant's overall health. With prompt diagnosis and treatment, most infants recover from NRDS without any long-term complications. However, some infants may experience complications such as chronic lung disease, retinopathy of prematurity, and developmental delays.

NRDS is a life-threatening respiratory condition that affects premature infants, particularly those with VLBW. It is caused by the immature lungs of premature infants and requires prompt medical attention. Treatment options include surfactant replacement therapy, mechanical ventilation, CPAP, oxygen therapy

Correspondence to: Anna Martini, Department of Women's and Children's Health, University of Milan, Rozzano, Milan, Italy, E-mail: anna.martini3@unibo.it

Received: 01-Feb-2023; Manuscript No. PTCR-23-22479; **Editor assigned:** 03-Feb-2023; PreQC. No. PTCR-23-22479 (PQ); **Reviewed:** 17-Feb-2023; QC. No. PTCR-23-22479; **Revised:** 24-Feb-2023; Manuscript No. PTCR-23-22479 (R); **Published:** 03-Mar-2023, DOI: 10.35841/2161-0665.23.13.500.

Citation: Martini A (2023) Neonatal Respiratory Distress Syndrome in Very-Low-Birth-Weight Infants: Causes, Symptoms, and Treatment. Pediatr Ther. 13:500.

and monitoring. With early diagnosis and treatment, most infants recover from NRDS without any long-term complications.