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REVIEWER'S REPORT

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Date: 18-03-2025

Title: Challenges of neonatal respiratory distress syndrome

| Recommendation: | Rating | Excel. | Good | Fair | Poor |
|--|----------------|--------------|------|------|------|
| Accept as it is YES | Originality | \checkmark | | | |
| Accept after minor revision Accept after major revision | Techn. Quality | | | | |
| Do not accept (<i>Reasons below</i>) | Clarity | | | | |
| - · · · · · · · · · · · · · · · · · · · | Significance | | | | |

Reviewer's Name: Dr Aamina

Reviewer's Decision about Paper:

Recommended for Publication.

Comments (Use additional pages, if required)

Reviewer's Comment / Report

Abstract

The abstract presents a concise overview of neonatal respiratory distress syndrome (NRDS), emphasizing its prevalence, symptoms, and the need for respiratory support. The mention of tachypnea, impaired oxygenation, and respiratory acidosis provides a clear picture of the condition. The importance of timely respiratory assistance and assessment of respiratory distress severity is well-stated. The abstract effectively conveys the study's focus on NRDS and its clinical significance.

Keywords

The chosen keywords accurately reflect the study's core themes, ensuring relevance for indexing and retrieval in academic research databases.

Introduction

The introduction effectively outlines the clinical significance of NRDS, particularly in preterm infants. The statistical data provided enhances the credibility of the discussion, reinforcing the severity of the condition. The mention of prenatal treatments, including antenatal corticosteroids, highlights preventive strategies that can reduce the incidence and severity of NRDS. The discussion on the impact of inadequate prenatal care on birth weight and neonatal intensive care unit admissions is relevant,

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demonstrating the broader implications of NRDS. The background information is well-structured, providing a clear foundation for the study.

Etiopathogenesis

This section provides a thorough explanation of the primary cause of NRDS—surfactant deficiency. The description of surfactant composition, function, and production timeline is detailed and informative. The discussion on hormonal regulation of surfactant production, particularly the roles of thyroid hormones and cortisol, adds depth to the pathophysiology. The impact of maternal diabetes, perinatal hypoxia, and other factors affecting surfactant effectiveness is well-explained. The mention of exogenous surfactant therapy as a treatment option further enhances the clinical relevance of this section.

Signs and Symptoms

The section effectively describes the hallmark symptoms of NRDS, including tachypnea, grunting, nasal flaring, chest wall retractions, and cyanosis. The explanations provided for each symptom are clear and well-supported by references. The inclusion of physiological mechanisms behind these symptoms enhances the reader's understanding of NRDS progression.

Overall Assessment

The manuscript is well-structured and presents a comprehensive analysis of NRDS, from its etiology and pathophysiology to clinical manifestations. The use of statistical data and references to established research strengthens the credibility of the discussion. The study contributes valuable insights into neonatal respiratory distress, particularly emphasizing the importance of early diagnosis and intervention. The writing is clear, informative, and clinically relevant, making it a significant addition to neonatal health research.