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Spectrum of respiratory distress in newborns admitted in NICU of Rohilkhand medical college & hospital, Bareilly

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Abstract

Introduction: Respiratory distress is a common problem in neonatal period. It is an important cause of neonatal mortality. The etiology of respiratory distress is large, includes Transient tachypnea of newborn, Respiratory distress syndrome, Meconium aspiration syndrome and other miscellaneous causes.

Aims & Objective: To find out the incidence and etiology of respiratory distress among admitted newborn babies. Materials and methods: This prospective observational study was done among 232 inborn patients admitted in NICU of Rohilkhand Medical College & Hospital between May 1 to August 31, 2018. The cases were analysed for incidence and etiology of respiratory distress.

Results: Respiratory distress was detected in 80 out of 232 admissions comprising 34.4% of total admissions. Transient tachypnea of newborn was the commonest cause (42.5%) followed by Pneumonia (32.5%), respiratory distress syndrome (15%), meconium aspiration syndrome (5%), cardiovascular (2.5%), surgical (2.5%). Conclusion: Spectrum of respiratory distress is high (34.4%) in admitted newborns. Incidence of respiratory distress is high in low birth weight babies 43 out of 80 (53.75%). Babies admitted with respiratory distress was more in females (52) than males (28). The mean gestational age was 32-34 weeks and mean birth weight was 1.6 kilos. The most common finding was early onset tachypnea (90%).

Keywords: Respiratory distress, newborn

Introduction

Respiratory distress (RD) is a common problem in neonatal period. It is an important cause of neonatal mortality^[1-3] and it has been found that, respiratory pathology is the commonest autopsy finding among early neonatal death^[4-5]. The etiology of RD in newborn is large, include transient tachypnea of newborn (TTN), respiratory distress syndrome (RDS), meconium aspiration syndrome (MAS), and other miscellaneous causes. There is paucity of studies regarding the cause of respiratory distress from western Uttar Pradesh. The present study was conducted with objectives to find out the incidence and etiology of respiratory distress among admitted inborn newborns.

Aim & Objective

- To find out the incidence and etiology of respiratory distress among admitted newborn babies.

Material & Methods

This prospective observational study was done among 232 inborn patients admitted in NICU of Rohilkhand Medical College & Hospital between May 1 to August 31, 2018 and were analysed for respiratory distress.

Informed written consent were taken from the parents of the neonates and they were assured that patient's personal information would be kept safe and will only be used for research.

Etiological work up included clinical assessment, chest x rays, sepsis screen, blood cultures, arterial blood gases, ECG, echocardiography

A case sheet proforma was prepared and the data was recorded. Ultimately all the data was entered in MS Excel spreadsheet and analyzed with appropriate statistical method – SPSS.

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Inclusion Criteria

- Babies With –
- >24 Weeks Gestation
- Tachypnea (Rr > 60) At Birth
- Nasal Flaring At Birth
- Chest Retractions At Birth
- Grunting At Birth

Exclusion Criteria

- Babies With –
- >42 Weeks Of Gestation
- Outborn Delivery
- Multiple Congenital Malformations

Results

- Total 80(34.4%) babies were admitted with respiratory distress out of 232 inborn admissions.
- Transient tachypnea of newborn was the commonest cause (42.5%) followed by Pneumonia (32.5%), Respiratory distress syndrome (15%), Meconium aspiration syndrome (5%), Cardiovascular (2.5%), surgical (2.5%)
- Incidence of respiratory distress is high in very low birth weight babies, 43 out of 80 (53.75%)
- Incidence of respiratory distress was more in females (52) then males (28).
- Mean gestational age enrolled was 32-34 weeks.
- Mean birth weight enrolled was 1.6 kilos.
- Most common finding was early onset tachypnea (90%).

Discussion

Present study shows the overall incidence of respiratory distress among inborn babies admitted in neonatal unit is 34.4%. A study by Kumar A *et al.* [3] showed the incidence of respiratory distress was 6.7% among all hospital delivery. Another study from a Delhi based referral hospital showed the incidence of respiratory distress 29.28% among all newborn admission, but the study population was mainly consisted of outborn babies [6]. Transient tachypnea of the newborn (TTNB) was the commonest (42.5%) cause of respiratory distress in newborn which is comparable to some study [3].

Whereas hyaline membrane disease (18%) was the commonest cause of respiratory distress in one study⁷ and pneumonia (68.7%) was the commonest cause of respiratory distress in another study [6] Diaphragmatic hernia and esophageal atresia with tracheo- esophageal fistula are two surgical conditions leading to respiratory distress in our study. Esophageal atresia with or without tracheo-oesophageal fistula have been observed in one study as the commonest pediatric surgical condition leading to neonatal respiratory distress [7].

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