

## CLINICAL PROFILE OF NEONATES WITH RESPIRATORY DISTRESS

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### Abstract

**Background:** To study the clinical profile of neonates with respiratory distress.

**Methods:** A prospective study was conducted on 100 cases. Term, pre-term and post-term babies both in-borns and out-borns cases were included in the study.

**Results:** The majority of cases 85.00% presented with increased respiratory rate, chest in drawings. 85.00% babies had flaring of alae nasi.

**Conclusion:** Increased respiratory rate along with chest in drawing, flaring of alae nasi are the presentation of RD in majority of cases.

**Keywords:** Respiratory distress, Clinical profile, Tachypnea

### Introduction

Respiratory distress (RD) is a challenging problem and is one of the most common causes of admission in neonatal intensive care unit (NICU).<sup>1</sup> The neonatal mortality rate varies by state but, overall, it is reported to be 39 a 1000 live births in India.<sup>2</sup> Neonatal period is a very vulnerable period of life due to many problems which can occur. Most of the causes of neonatal morbidity and mortality are preventable.<sup>3</sup> The common causes of RD in neonates includes transient tachypnea of the newborn (TTN), hyaline membrane disease (HMD), birth asphyxia, pneumonia, meconium aspiration syndrome (MAS), and other miscellaneous causes.<sup>4,5</sup>

The severity of respiratory distress can be assessed by Downe's scoring system which includes parameters such as respiratory rate, cyanosis, retractions, grunting and air entry in both the lungs.<sup>2</sup> Common causes of respiratory distress are respiratory distress syndrome, transient tachypnea, pneumonia, aspiration syndromes, pneumothorax and air leaks, pulmonary edema, pleural effusion and pulmonary hemorrhage.<sup>1</sup>

Since the millennium development goals (MDG) were formed, progress toward reducing child mortality has accelerated but remains insufficient to achieve MDG. In particular, global progress toward reducing neonatal deaths that is deaths during the first 28 days of life has been slow and neonatal deaths now account for a greater proportion

of child deaths than in 1990. India accounts for 27.3% of total neonatal deaths in the world. Distress NRD is ranging from 2.2% to 7.6% in developed countries and from 0.7% to 8.3% in India.<sup>2-6</sup> It is caused by the delay in the absorption of fluid in the lungs after birth (i.e. excessive lung fluid).

### Materials and Methods

**Study Design** - A prospective study was conducted on who were admitted in NICU.

**Inclusion Criteria** -Both in-born and out-born neonate admitted to NICU with RD.

### Exclusion Criteria –

- Babies more than 28 days
- Babies <28 weeks of age.

### Data Collection

Neonates were classified as term, pre- and post-term were enrolled as cases with RD on the basis of clinical profile.

A detailed proforma including name, age, sex, and residence was obtained. Neonatal data recorded includes weight of the baby, gestational age, mode of delivery, APGAR score, if available, the need for resuscitation after birth, onset of RD and resolution of RD.

## Results

Of the 100 cases admitted with RD, 61 babies were delivered vaginally and 39 by lower segment caesarean

section (LSCS). There were 65 males and 35 females in the study. There were 45 pre-term babies, 53 term and 2 post-term neonates who were admitted with RD.

**Table 1: Clinical profile**

Clinical profile	No of babies	Percentage
Tachypnea	85	85.00%
Falring of alae nasi	85	85.00%
Chest in drawing	83	83.00%
Grunting	43	43.00%
Cyanosis	38	38.00%

The majority of cases 85.00% presented with increased respiratory rate, chest in drawings. 85.00% babies had flaring of alae nasi.

## Discussion

Of the 100 cases admitted with RD, 61 babies were delivered vaginally and 39 by lower segment caesarean section (LSCS). There were 65 males and 35 females in the study. There were 45 pre-term babies, 53 term and 2 post-term neonates who were admitted with RD.

A study done Santhosh *et al.* in their study showed 39% term and 61% pre-term neonates who were developed RD in newborn. the incidence of MAS in developed countries is on the decline possibly due to improved obstetric care<sup>7</sup>. Pneumothorax usually develops secondary to an underlying disease process but can occur spontaneously in 1% of newborns around the perinatal period, although only about 10% of these are symptomatic.<sup>8</sup> The majority of cases 42 (82%) presented with increased respiratory rate, chest in drawings. 41 (82%) babies had flaring of alae nasi. TTN babies develop an oxygen requirement that necessitates admission to the neonatal unit for a few days accounting for approximately 10% of all newborn term admissions.<sup>9</sup> In a review of TTN, Yurdakok suggests a genetic link between TTN and later onset asthma.<sup>10</sup> A similar study done by Keerti *et al.* showed that of all the symptoms, grunting, flaring of alae nasi had high specificity for RD in newborn while tachypnea, chest retractions and difficulty in feeding has high sensitivity.<sup>11</sup> Every year a significant number of termborn infants are admitted to neonatal units for management of their respiratory distress.<sup>12</sup> And that the most common clinical presentations were tachypnea, flaring of alae nasi and chest retraction. It was also observed that there was a male preponderance with a ratio more than 1.5:1.<sup>1</sup> And showed inversely proportional to gestational age and birth weight, and C section can favor the onset of RD in newborns.<sup>1</sup>

## Conclusion

Increased respiratory rate along with chest in drawing, flaring of alae nasi are the presentation of RD in majority of cases.

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