



## INCIDENCE OF FEEDING DIFFICULTIES IN LATE PRETERMS IN A TERTIARY CARE HOSPITAL

Dr. Ankit Jishtu\*

MD Pediatrics (SR, IGMC SHIMLA) \*Corresponding Author

Dr. Kanika Chauhan

MD Radiodiagnosis CH Kandaghat

### ABSTRACT

**Objective:** To study the incidence of feeding difficulties in late preterm born in a tertiary care hospital.

**Methods:** The study was conducted at Department of pediatrics at Dr RPGMC, Tanda at Kangra, Himachal Pradesh. It was a one year hospital based prospective study on late preterms (gestation 34 wk to 36+6 wk). A total of 592 late preterm infants were enrolled in our study, as per the inclusion criteria. **Results:** Feeding difficulties were seen in 55 (9.29%) babies. **Conclusion:** Late preterms are not equivalent to term babies as far as feeding is concerned. They have feeding problems not only at birth but also when discharged after a transient successful breast feeding. Thus, parents of such babies must be well counselled about the anticipated feeding problems and when to approach a healthcare facility.

**KEYWORDS :** Late preterm, feeding difficulties.

### INTRODUCTION

Preterm birth is one of the major clinical problems in obstetrics and neonatology, as it is associated with increased perinatal mortality and morbidity.<sup>1</sup> Preterm infants refer to those born before 37 weeks of gestation from the first day of last menstrual period. Late preterm infants refer to those born between 34 completed weeks (34+0/7) and less than 37 completed weeks (36+6/7). Babies born at this gestation were considered as "near term" babies and equivalent to term babies. It was believed that these babies will have fewer problems postnatal and will do well with routine newborn care meant for a term baby and therefore they never received the attention they deserved. These "late-preterm" infants are often the size and weight of some term infants. Because of this fact, late-preterm infants may be treated by parents, caregivers, and health care professionals as though they are developmentally mature and at low risk of morbidity. Late preterm infants are physiologically and metabolically immature. As a consequence, late preterm infants are at a higher risk than the term infants, of developing medical complications that result in higher rates of mortality and morbidity during the birth hospitalization. In addition, late-preterm infants have higher rates of hospital readmission during the neonatal period than do term infants.<sup>2</sup> There are multiple maternal and fetal risk factors associated with late preterm birth. It is now realized that babies born at 34 to 36+6 weeks should not be considered as term babies as the magnitude of morbidities and mortality in these subset of babies is much higher compared to term neonates. Greater morbidities translate to increased use of intensive care units, increased length of stay, and higher hospital costs. Late preterm birth increases mortality risk when compared to term infants, with a range of two to six times the rate of death in term neonates. While serious morbidities are rare, the late preterm group has 2 to 3 fold increased rates for mild to moderate morbidities, one such morbidity is poor feeding. Feeding difficulties in late preterm infants are due to associated with relatively low oromotor tone, function, and neural maturation.

### II. MATERIAL AND METHODS

This prospective study was conducted in the department of paediatrics, Dr RPGMC, Tanda at Kangra, Himachal Pradesh. It was a 12 month long study, in which all the late preterms born in the hospital were enrolled. They were assessed clinically during the daily rounds and any difficulty in feeding was noted alongwith other details. Data was collected on a predesigned proforma during the hospital stay and outcome was recorded. The results were calculated and interpretation was done.

### Inclusion Criteria

All live inborn late preterm neonates.

### Exclusion Criteria

Infants with major congenital anomalies.

Multifetal births.

Infants with inborn errors of metabolism.

Infants whose parents are not willing to give consent.

### METHODOLOGY

All the late preterm babies delivered in the hospital during the study period were identified and their gestational age was confirmed by using maternal last menstrual period or first trimester ultrasound scan. In case of unavailability of the first two or if there was any discordance amongst the first two, then the baby was subjected to gestational age assessment by New Ballard Scoring. They were enrolled after explaining all the details of the study to the parents. Delay in initiating and maintaining adequate direct breast feeding was considered as feeding difficulties in the absence of sepsis and respiratory distress.

### Statistical Analysis

Data was presented as frequency and percentages. Ethical Issues The study was conducted after getting approval of the 'Institutional ethics committee'. Parents of the late preterm newborns were explained about the study in which they were going to participate, in the language they understood. Enrollment was done only after taking informed written consent. Parents were explained the need for investigations. There was no drug trial or experiment involved. Investigators were aware of 'Ethics in Biomedical Research' guidelines by ICMR (2006) and 'Declaration of Helsinki (modified 2000)'. These were followed in letter and spirit. Every precaution was taken to respect the privacy of the patient, the confidentiality of the patient's information. The parents were given the right to abstain from participation in the study or to withdraw consent to participate at any time of the study without reprisal. Written informed consent was obtained from parents of all the late preterm newborns included in the study.

**Financial Disclosure** No cost was charged from the parents for any investigation done under this study. We did not receive any financial benefit from any source for this study.

### RESULTS

There were 10,096 deliveries at our institute during the study

period. Out of these 604 (5.98 %) were born late preterm. A total of 592 late preterm infants were enrolled in our study, as per the inclusion criteria. The average age of the mothers in our study was 26.12 ( $\pm 3.46$ ) years. Of these, 295 (49.83%) were primigravida. There were 452 (76.6%) vaginal deliveries and 138 (23.31%) caesarean deliveries. Late preterm babies born at a gestation of 36 weeks or more predominated the study group. They constituted more than half (55.91 %) of the study group. Those born between 35 weeks and 35+6 weeks constituted one fourth (26.18 %) of the study group. The most immature of them all were those born between gestation of 34 weeks to 34+6 weeks and they constituted 17.9% of the study group. Feeding difficulties were seen in 55 (9.29%) babies. The incidence of feeding difficulties in late preterm babies of 34 weeks gestation was 21.69% and a significant decrease was observed as the gestation increased from 34 weeks (9.03 %) to 36 weeks (5.43 %).

#### IV. DISCUSSION

Feeding difficulties in late preterms may be attributed to relatively low oromotor tone, function and less neuronal maturation. Even though these babies are allowed to breast feed but their initiation and maintenance of breast feeds must be monitored, as there are more chances of feeding failures as compared to their term counterparts. Feeding difficulties were found in 9.29% which were lower than that found in a study by Pinar Binarbasi et al<sup>3</sup> (19.1%), Sanjeet et al (18.06%) and Osama Abu Salah et al<sup>4</sup> (15.8%). This may be due to adequate counselling of mothers for breast feeding as well as routine assessment of feeding by motivated healthcare providers at every contact with infant. Ming et al<sup>5</sup>, in a 2 year retrospective study, concluded that among 914 late preterm neonates, the incidence of feeding difficulties was greater in the late preterm group (2.2% vs.0.4%). Also, the feeding difficulty was found to be greater in 34 weeks' gestation group when compared with 36 week gestation group i.e. 2.5% vs.1.6%. Arunagirinathan et al<sup>6</sup> did a hospital based prospective study in a tertiary care hospital at Puducherry, where the incidence of feeding difficulties in late preterm was found to be in 34 out of 112 late preterm babies constituting 30.3% of late preterm infants.

#### V. CONCLUSION

With obstetric advancements and increased standards of antenatal care, the number of late preterms are on a rise. Along with that the magnitude of morbidities like feeding difficulties have also increased. Parents, Healthcare care providers often make a mistake to assume late preterm as equivalent to term baby and ignore their needs. Therefore, these babies must be closely watched over for feeds initiation as well as maintenance.

#### REFERENCES

1. Selvan T, Saravanan P, Nagaraj MS, Tudu MN. A study of short term outcome of late preterm babies. *Int J Contemp Pediatr* 2017;4:858-861.
2. Raju T, Higgins R, Stark A, Leveno K. Optimizing care and outcome for latepreterm (near-term) infants: A summary of the workshop sponsored by the National Institute of Child Health and Human Development. *Pediatrics* 2006;118:1207-14
3. Binarbasi P, Akan Y, Narter F, Telatar B, Polatoglu E, Agzikuru T. Mortality and morbidity in late-preterm newborns. *Turk Arch Ped.* 2013;48:17-22
4. Abu-Salah O. Unfavourable outcomes associated with late preterm birth: observations from Jordan. *J Pak Med Assoc.* 2011;61:769-72.
5. Tsai ML, Lien R, Chiang MC, Hsu JF, Fu RH, Chu SM, et al. Prevalence and morbidity of late preterm infants: Current status in a medical center of northern Taiwan. *Pediatr Neonatol* 2012;53:171-7.
6. Arunagirinathan A, Thirunavukarasu B, Earan S, Vishwanathan IS, Sukumaran B. Morbidity and mortality patterns of late pre-terms and their short-term neonatal outcome from a tertiary care hospital Puducherry. *Int J Sci Stud* 2015;3:158-62.