

Scaling up Small and Sick Newborn Care Through the Establishment of the First Human Milk Bank in Nepal

Authors : Prajwal Paudel, Shreeprasad Adhikari, Shailendra Bir Karmacharya, Kalpana Upadhyaya

Abstract : Background: Human milk banks have been recommended by the World Health Organization (WHO) for newborn and child nourishment in the provision of optimum nutrition as an alternative to breastfeeding in circumstances when direct breastfeeding is inaccessible. The vulnerable group of babies, mainly preterm, low birth weight, and sick newborns, are at a greater risk of mortality and possibly benefit from the safe use of donated human milk through milk banks. In this study, we aimed to shed light on the process involved during the setting up of the nation's first milk bank and its vitality in small and sick newborn nutrition and care. Methods: The study was conducted in Paropakar Maternity and Women's Hospital, where the first human milk (HMB) was established. The establishment involved a stepwise process of need assessment meeting, formation of the HMB committee, learning visit to HMB in India, studying the strengths and weaknesses of promoting breastfeeding and HMB system integration, procurement, installation, and setting up the infrastructure, and developing technical competency, launching of the HMB. After the initiation of HMB services, information regarding the recruited donor mothers and the volume of milk pasteurized and consumed by the needy recipient babies were recorded. Descriptive statistics with frequencies and percentages were used to describe the utilization of HMB services. Results: During the study period, a total of 506113 ml of milk was collected, while 49930 ml of milk was pasteurized. Of the pasteurized milk, 381248 ml of milk was dispensed. The total volume of milk received was from a total of 883 after proper routine screening tests. Similarly, the total number of babies who received the donated human milk (DHM) was 912 with different neonatal conditions. Among the babies who received DHM, 527(57.7%) were born via CS, and 385 (42.21%) were delivered normally. In the birth weight category, 9 (1%) of the babies were less than 1000 grams, 75 (8.2%) were less than 1500 grams, 405 (44.4%) were between 1500 to less than 2500 grams whereas, 423 (46.4%) of the babies who received DHM were normal weight babies. Among the sick newborns, perinatal asphyxia accounted for 166 (18.2%), preterm with other complications 372 (40.7%), preterm 23 (2.02%), respiratory distress 140 (15.35%), neonatal jaundice 150 (16.44%), sepsis 94 (10.30%), meconium aspiration syndrome 9(1%), seizure disorder 28 (3.07%), congenital anomalies 13 (1.42%) and others 33(3.61%). The neonatal mortality rate dropped to 6.2/1000 live births from 7.5/1000 live births in the first year of establishment as compared to the previous year. Conclusion: The establishment of the first HMB in Nepal involved a comprehensive approach to integrate a new system with the existing newborn care in the provision of safe DHM. Premature babies with complication, babies born via CS, perinatal asphyxia and babies with sepsis consumed the greater proportion of DHM. Rigorous research is warranted to assess the impact of DHM in small and sick newborn who otherwise would be fed formula milk.

Keywords : human milk bank, sick-newborn, mortality, neonatal nutrition

Conference Title : ICP 2025 : International Conference on Pediatrics

Conference Location : Manila, Philippines

Conference Dates : February 17-18, 2025