Human milk bank: an essential investment for a healthy beginning

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A child's growth, development, and long-term health trajectory are largely influenced by the "first 1000" days of life, when breastfeeding becomes the gold standard "physiological, immunological, and neurological development" of the infant.[1]

Human breast milk (HBM) is an inexpensive, natural, easily accessible, sterile, environmentally friendly, and ideal source of nutrition for all children, regardless of their economic status. HBM comprises proteins, vitamins, minerals, and bioactive substances, yielding about 65-70 kcal per 100 ml.[2] It has specific benefits, defends against infection and promotes optimal nutrition. Cow's milk and infant formulas are often used as substitutes for HBM, as they mimic its nutritional composition. However, they lack critical bioactive and immunological components, increasing the risk of infections, sepsis, and necrotizing enterocolitis.[2] Hence, no substitute matches the completeness of human breast milk.[2,3] Many infants do not get their mother's own milk (MOM) due to the mother's death or illness, delayed milk production, premature, low birth weight infant, or inability to latch or even abandonment of the infant.[4] This leaves the infant vulnerable to disease, disability, and death. In such cases, the WHO, American Academy of Pediatrics, and other policy groups recommend donor HBM.[5]

Nepal faces significant challenges in childhood nutrition and mortality rates. According to the NDHS 2022 data, the neonatal mortality rate of Nepal is 21 per 1,000 live births. Similarly, the infant mortality rate is 28 per 1,000 live births, and the child mortality rate is 33 per 1,000 live births.[6] These high mortalities underscore the necessity of developing and establishing a human milk bank. In August 2022, "Amrit Kosh," Nepal's first HMB (Human Milk Bank) at Paropakar Maternity and Women's Hospital, was initiated. It addresses both milk donation and lactation support, ensuring equitable access to lifesaving breast milk to all in need. The center collects, pasteurizes, tests, and safely stores donor human milk, ensuring its appropriate distribution to the needed.[7]

The very first HMB was established and has existed since 1909, a century ago, in Austria. Many countries around the world, including India, adopted human milk banking more than three decades ago. Despite being a late entrant in this innovation, its establishment marks a transformative step in ensuring vulnerable infants receive the best possible start in life.[7] The center ensures proper nourishment for the children in critical condition, including many premature newborns. Around 500 infants are supported every month.[8] Plans to expand such milk banking in hospitals all over Nepal are in process. Expanding such facilities will not only ensure reducing neonatal/infant/under-five mortalities but also promote healthier future generations to come. Thus, human milk bank is an essential investment to ensure a healthy begining.

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