Editorial Review

Human milk banking: Indian perspective

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ABSTRACT

Getting the best possible start in life is birth right of each and every newborn. The choice of feeding is direct at mother’s breast, if not possible then expressed Mother’s Own Milk, then donated fresh milk, then pasteurized donated human milk and lastly animal milk. The unregulated and uncontrolled use of animal or formula milk continues in our society endangering health of the future generation. Though wet nursing had been in practice since mythological ages, modern human milk banking is in infancy in India. In India burden of LBW babies in various hospitals is about 30% to 40% with significant mortality and morbidities. Human milk banks are primarily focused to provide donor milk to high risk newborns. Human Milk dispensing strategy for sick babies is an innovative strategy that has been implemented with much success in reducing hospital stay, improved outcome, low infection rates and enhancement of Intellectual and emotional quotient. At present there are no laws governing human milk banks in India. The various stakeholders agreed that human milk banks are “need of the hour” and must be promoted, established and maintained preferably in all neonatal set-ups or critical care units. There is need for government and policy makers to frame guidelines, legislations, rules so as to protect the rights of mother and child. Human Milk Banking is an important medical-social initiative as far as future of human race is concerned. Hence Government, health experts and civil society must join hands to propagate concept of human milk banking for sake of thousands of LBW and preterm babies.

Key words: Human Milk banking, Mother’s own milk, Breast milk, Wet nursing, PDHM

INTERNATIONAL STATEMENT

The animal or formula milk is not suited for most of the human babies and results in various health hazards. It not only endangers the physical growth and developments but also results in impaired cognitive, emotional and intellectual development. Sometimes it may also result in many allergic disorders. Still, the unregulated and uncontrolled use of animal or formula milk continues in our society endangering the health of the future generation. If we want to preserve the health of our babies there is need to curb this tendency of using animal milk and avoiding breast milk. WHO and UNICEF, made a joint statement in 1980: “Where it is not possible for the biological mother to breast feed, the first alternative, if available, should be the use of human milk from other sources. Human milk banks should be made available in appropriate situations.”
THE INDIAN SCENARIO

The concept of 'Wet nursing' is not new in Indian mythology or history. Mother Yashoda has probably nursed and fed Lord Krishna while Panna Dhay has saved Uday singh at the cost of her own son. The history of Rajasthan (Mewar and Marwar) and many parts of India are well known for the wet-nursing. Though wet nursing had been in practice since mythological ages, modern human milk banking is in its infancy in India. Lack of awareness, leadership apathy, infrastructural and maintenance cost, fewer NICU setups etc are few reasons for the same. India faces its own unique challenges, having the highest number of low birth weight babies and significant mortality and morbidities in VLBW population. There is a grave need to create awareness for using breast milk instead of formula milk in health care facilities too. Often maternity services give formula supplements as a general practice in first 48 hours after birth rather than proper management of lactation. Keeping in mind the complications associated with formula feeding to the sick tiny preterm neonates and in majority of mothers’ inability to breastfeed in the initial period, there is a need to establish human milk banks in all level II and level III facilities.

THE NEED FOR HUMAN MILK BANKS

Breastfeeding is best method of infant feeding, because human milk continues to be the only milk which is uniquely suited to the human infant. All mothers should be encouraged to breast feed their own infants. When a mother, for some reason, is unable to feed her infant, her breast milk should be expressed and fed to her infant. If mother’s own milk is unavailable or insufficient, the next option is to use PDHM. In our country the burden of low birth weight babies in various hospitals is about 30% to 40% with significant mortality and morbidities. Feeding these babies with breast milk can significantly reduce the risk of infections.

Human milk banks are primarily focused to provide donor milk to high risk newborns admitted in neonatal unit. Breast milk is of special importance for sick preterm and low birth weight infants who are admitted to N.I.C.U. The recently published N.R.H.M. guidelines also recommend this concept. Presence of human milk banks in the NICUs is associated with elevated rates of exclusive breast feeding rates in VLBW babies. This strategy is an effort to provide breast milk to all babies, in addition to the efforts to promote natural breastfeeding by mother. The Human Milk dispensing strategy for sick babies is an innovative strategy that has been implemented in many countries with much success in reducing hospital stay, improved survival outcome, low infection rates and human milk’s contribution towards enhancement of the Intellectual and emotional quotient of the child.

ESTABLISHMENT OF HUMAN MILK BANK

The first human milk bank was established at Sion Hospital in Mumbai way back in 1989 and currently number of human milk banks has grown to nearly 20 in all over India but the growth of human milk banks has been very slow as compared to the growth of new neonatal intensive care units. N.G.O’s and Spiritual organizations with the help of medical professionals can encourage lactating mothers in the community to donate their milk to help the high risk neonates. Certain NGOs who take care of abandoned babies may have a human milk bank in their facility. The cost of a conventional milk bank is high and unsustainable at the village or a block level in India. Pasteurization process bears a major time, expertise, staff, maintenance and financial expenses. For conditions where fresh MoM can be used pasteurization may be avoided. It can be a major saving when implemented for large population.

THE LEGAL SITUATION IN INDIA

At present there are no laws governing human milk banks in India. France is the only country where Human milk banks are governed along with blood banks. Therefore every neonatal unit can establish a human milk bank on its own. Recently, a Technical Resource Group Meeting on Human Milk Bank Strategy in India and thereby receiving inputs on respective chapters by most experts, to draft guidelines was designed and held by the Ministry of Health and Family Welfare, Government of India. Human Milk Banks should include activities which protect, promote and support breastfeeding. They should comply by the laws of the land including IMS Act. It was discussed and decided that there is need to strengthen the IMS Act and decrease the use of commercial formula milk. So as to improve the neonatal and child nutrition and to decrease the neonatal, infant and childhood mortality or morbidity; the establishment of milk banks shall be a long-term investment policy. The various stakeholders agreed that the human milk banks are the “need of the hour” and must be promoted, established and maintained preferably in all neonatal set-ups specially those are providing critical care.

HUMAN MILK IS FOOD, TISSUE OR DRUG

The breast milk is supposed to be the “tailor made” nutrition for the newborn baby. It is the most appropriate and “species specific” food and nutrition for the optimal growth and development of the baby irrespective of the weight and gestation. All these facts make it a food material for the baby. With technological advances, artificial feeding products are continually improving but human milk factors cannot be replicated or reproduced in laboratory. Awareness of the special nutritional needs of the premature infant have stimulated interest in human donor milk banking and such milk from the banks will definitely be superior to formula or animal milk. This will further help in reducing the childhood mortality or morbidity. The need is to establish such banks especially in health set ups taking care of compromised babies at the age of viability. Human milk banks and its quality assurance in the country need to be maintained uniformly so that best nutritional outcomes are possible.
COMMERCIALIZATION OF HUMAN MILK BANK

Efforts to setup a company that sells human milk bank have been made in past. In future, human milk powder may be available for anybody who needs it, even at a grocer's shop. The government must ensure that such activities are nipped in the bud. Recently there is information or news regarding commercialization and selling of human milk. In the era of HIV or AIDS the dangers of such selling is obvious. Purchase of milk over the Internet is even more risky. The producer of the milk may not even be human! Cow milk or goat milk could easily be substituted. The cleanliness of the milk is certainly not monitored. And there are no safeguards through pasteurization and donor screening. A US firm is looking to commercialize breast milk by selling it to hospitals for the treatment of sick babies.

CONSENT

The donor mother as well as recipient mother shall be counseled, the confidence shall be built and an informed consent shall be obtained. There is need to provide quality assured safe human milk to the recipient.

There can be claims on transmission of infection due to feeding from milk bank in the event of an outbreak due to contamination of supplied milk. There is only a single report of outbreak due to contamination of pasteurizer so far in the literature. However, it is a potential problem and should be taken care of during the process of informed consent to the family of the recipient. Similarly, there may be claims on transmission of infection due to feeding from milk bank in the event of a baby contracting a hospital acquired infection while still in neonatal unit. This aspect must be taken care during information sharing and consent taken from recipient’s parents.

There can be allegation of transmission of infection due to feeding from milk bank after discharge of a baby if a baby develops infections known to be transmitted through breast milk. This aspect must be taken care during information sharing and consent taken from recipient’s parents.

RECORD KEEPING

The Human Milk banking association of North America recommends that records of donor and recipients be stored till the recipient is of 21 years age. Whereas NICE guidelines recommend that records be kept till the recipient is 30 years old. As incubation period for most infection varies from a few weeks to six months and appearance of symptoms is faster in infants and children, there seems to be no rationale for keeping records beyond five years, unless one is working in an area where milk kinship issue is of paramount importance. In India the Blood bank records are also to be retained for a minimum period of five years.

RELIGIOUS ISSUES

The issues like milk kinship among Muslims have been debated among Muslim scholars. There is no unanimity of opinion. However, European Council for Fatwa and Research (ECFR) in 2004 has accepted donation by Muslim mothers and acceptance of milk by Muslim baby as legal. Most countries in Arab world have not accepted this idea. At present there is no official position among Indian Muslim scholars on it.

COUNSELING OF STAKEHOLDERS

Counseling and motivation sessions may be conducted by health care workers, lactation experts, trained nurses or social workers in groups or individually in post-natal wards, nurseries, outdoor departments, immunization clinics and social group’s gatherings. Involvement of NGOs and formation of peer groups can also help a lot. Potential donor can be counseled in person or telephonically. Generally a face to face communication along with video on the process of breast milk collection is most effective method of counseling as it provides opportunity for answering the questions of donor mothers and alleviates anxiety.

Counseling may be verbal or aided by pictures, posters, videos, role plays and utilization of various media. Another unique method for collection of large amount of milk quickly is to organize human milk donation camps like blood donation camps. Donations are taken under supervision of milk bank staffs. Donor mothers are invited and motivated by women’s social groups. Maintaining cleanliness during collection and transportation is of utmost importance.

THE FUTURE

The breast milk also supposed to be one of the excellent sources of stem cells. Stem cells can be sourced from breast milk and have the potential to help people suffering from debilitating diseases such as Parkinson’s and diabetes. The benefit of obtaining stem cells from breast milk is that they can be accessed non-invasively, unlike getting them from the bone marrow, umbilical cord blood or peripheral blood.

There is need for the government and the policy makers to frame the guidelines, legislations, rules so as to protect the rights of the mother and child. There is every possibility that the breast milk i.e. “Liquid Gold” can be sold in the commercial market once it is available in the milk banks. The government should ensure that there is no commercialization of human milk by various stake holders specially the multi-nationals. The gender discrimination and exploitation of the mother and misuse of the human milk must be prevented at all cost. Hence the Government, health experts and the civil society must join hands to propagate the concept of human milk banking for the sake of future of thousands of low birth weight and preterm babies born in our society. The Human Milk Banking is an important medical-social initiative as far as future of human race is concerned.
CONCLUSION

There has been a definite cost effectiveness of using banked human milk in neonatal intensive care units observed in western countries largely by reduction in the rate of NEC. In a country like ours, the cost of running a milk bank with potential cost saving due to reduction in NEC and sepsis rate and ultimately duration of hospital stay have not been adequately evaluated, but given the high incidence of sepsis and a large burden of premature births, this intervention is likely to result in substantial saving for the nation. It is clear that artificial formula will never provide the broad range of benefits of human milk. Given the high rate of preterm births in the country and level of malnutrition that ensues in the postnatal growth in such babies after birth, there is an urgent need for establishing milk banks across the country especially in the large NICUs of all hospitals. In remote places, poor resources the situation is grave where breastfeeding is undermined by formula milks and absence of conceptualization of feeding raw milk. But refrigerators are there everywhere so MoM feeding can be easily practiced with proper dissipation of scientific information on managing human milk. In resource poor and ethic restricted countries efforts are being put to use unpasteurized raw frozen donor milk after stringent donor screening. Hence the Government, health experts and the civil society must join hands to propagate the concept of human milk banking for the sake of thousands of low birth weight and preterm babies.

REFERENCES