

Support Practices to the Donation of Human Milk as a Method for Effective Protection and Promotion of Breastfeeding. A Brief Report

Pasqua Anna Quitadamo^{1*}
Giuseppina Palumbo¹
Paola Lurdo¹
Pierpaolo Cristalli¹

¹NICU, HMB "Casa Sollievo della Sofferenza" San Giovanni Rotondo, Italy

Abbreviations

MM: Mother Milk

DM: Donor Milk

HMB: Human Milk Bank

NEC: Necrotizing Enterocolitis

VLBW: Very Low Birth Weight

KeyWords: Donation Milk, Promotion of breastfeeding, Human milk banking.

Background

The advanced studies on breast milk have confirmed it is an irreplaceable health opportunity promoted all over the world [1-6].

This is even more true in the premature infant for whom the extensive use of mother milk (MM) significantly reduces the risk of major complications such as NEC [7-14].

If mother's milk is not available, the best alternative is donated milk (DM). The presence of a milk bank has been shown to act as a facilitator of feeding with MM in NICU.

There is strong evidence that breastfeeding and milk donation complement each other and synergistically contribute to improve child health and survival, through the exclusive feeding of all newborns [1-6].

Milk donation support practices are the most effective method of protecting, promoting and supporting breastfeeding [15].

The availability of a human milk bank (HMB) in NICU not only does not represent an unfavorable element for breastfeeding but, rather, it significantly improves the availability of mothers' milk for feeding the premature baby and the breastfeeding reported with higher percentages of nutrition with mother's milk upon discharge from NICU [16-20]. This is the experience of many banks, like the one in Madrid where there was a higher consumption of own mother's milk during the hospital stay and the exposure to formula in the first 15 days of life was reduced from 50% to 16,6% and a higher rate of exclusive breastfeeding at hospital discharge (54% vs 40%) [18].

Rather, the growth of a milk bank is one of the possible strategies for promoting breastfeeding. This is easily understandable if we consider that the presence of a milk bank in NICU results in the activation of standardized methods to increase the availability of breast milk; from the drafting of protocols dedicated to the implementation of all procedures

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***Corresponding author:** Pasqua Anna Quitadamo, NICU, Hospital " Casa Sollievo della Sofferenza", San Giovanni Rotondo (FG),Italy. Email: [pasquaq\(at\)tiscali.it](mailto:pasquaq(at)tiscali.it)

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recognized as effective for the promotion of breastfeeding at the time of delivery and during the hospital stay, to the specific support of mothers of premature babies with coded breast stimulation systems and counseling, including the possibility of donating part of their milk to the bank during hospitalization of the child in NICU [19].

All the policies and programs that foresee an increase in the use of donated milk do not in any way undermine breastfeeding but are part of a single strategy to ensure optimal feeding to premature babies [6].

That's also our experience that we shared with a paper, already published [19], and with this brief analysis where we reported a doubling of the percentages of feeding with mother milk of VLBW.

Since 2010, our NICU has set up a HMB with dedicated staff that supply DM to premature babies from the first hours of life. In recent years, a protocol for the initiation of lactation has been developed involving early contact with mothers of newborns in order to emphasize the importance of MM and provide indications on the codified procedure of early and systematic stimulation of the breast. At the same time, specific training of the personnel is carried out.

The study

Aims

to verify how the systematic use of standardized nutrition promotion measures with MM has impacted in recent years on the production of MM by VLBW mothers;

to assess the availability of MM after the start of feeding with DM.

Materials and Methods

An analysis on the feeding for all the VLBWs born from January 2014 to December 2017, was made during their stay in NICU, using a dedicated database and consulting medical records.

The analyzed data are:

- percentage of VLBWs fed with MM, MM + DM, DM
- timing of MM production from birth
- donation to HMB.

Results

All the VLBWs in the period considered were fed with human milk up to the pre-discharge period. Out of a total of 105 VLBWs recruited, the percentage of infants fed exclusively with enteral MM was 18-22% in 2014-2015, 46% in 2016 and 52% in 2017, with the specification of 2 mothers of VLBWs twins (GA 27-29 weeks) fed with MM who devoted 50 liters to the HMB.

The exclusive feeding with DM ranged from 35-32% in 2014-15 to 13% in 2016 and 7% in 2017. The remaining percentages are related to mixed nutrition with MM/DM.

The availability of MM at the 2nd-3rd day of life has increased, compared to 2014\2015 by 25% in 2016 and

40% in 2017.

14 mothers of infants <35 weeks donated about 98 liters of milk. 17 liters come from 3 mothers (2015), 12 liters from 3 mothers (2016), 73 liters from 6 mothers (2017).

Conclusion

The role of HMB in facilitating the feeding of VLBWs with own mothers' milk is real but only if supported by standardized procedures of lactation stimulation and staff training. The analysis also shows that even VLBW twins can be fed exclusively with mothers' milk who even become donors.

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