

Evidence supporting the use of human milk in neonatal units

Prof Jean-Charles Picaud

Neonatal intensive care unit, Hopital croix rousse, Lyon, France

Breastfeeding/human milk (HM) has specific health benefits in preterm infants. Prematurity is associated with specific complications and breastfeeding/HM can help to reduce neonatal and long term morbidity in these patients.^{1,2} Human milk can be mother's own milk (MOM) or donor human milk (DHM) when MOM is not available.³ Preterm infants consume significant amount of HM during hospitalisation. We calculated that the median consumption of HM (MOM or DHM) in preterm infants born below 32 weeks gestational age was 18 L. Feeding very immature patients with HM raises the questions of 1) Providing them with enough HM, 2) Nutritional and microbiological safety.

Efficient strategies to support breastfeeding in mothers who delivered before term are well-known, but not always well-applied. Indeed, it requires appropriate training of professionals, so that they can reach a high level of knowledge on this topic. The training should concern professionals not only in Neonatology but also in Maternity. Organization, structure and professionals should support early and frequent pumping. In Neonatology, we observed that e-learning based on Preterm Infant Breastfeeding Assessment Scale,⁴ was able to support quasi-simultaneous training of more than 1000 professionals. It should be included in global care individualized and centered on the family. This new standard of care includes skin-to-skin contact and kangaroo mother care, which has been shown to favor breastfeeding. It also consists in protecting oral feeding performance by avoiding dysstimulations of oral sphere, early oral stimulation and non-nutritive suckling.

As good postnatal growth has been associated with reduced risk of retinopathy of prematurity, better cognitive development, HM should provide enough nutrients to support growth. Therefore, it requires an appropriate fortification during hospitalisation. Although there is no consensus, it seems that adjustable fortification based on regular assessment of weight gain and serum urea is able to reach this objective. It takes in account the nutrient content of HM and the way each infant uses available nutrients. Presently, it is well-know that the composition of HM varies widely according to gestational age at delivery, lactation stage, etc. Protein content is significantly higher in HM from mothers who delivered preterm when compared to those who delivered at term. Therefore, it is crucial to support breastfeeding in mothers who delivered preterm so that they are able to cover the needs of their own infant.

References

- 1 Quigley MA et al. Formula milk versus donor breast milk for feeding preterm or low birth weight infants. Cochrane Database of systematic reviews. 2007;issue 4.
- 2 Vohr BR et al. Persistent beneficial effects of breast milk ingested in the neonatal intensive care unit on outcome of extremely low birth weight infants at 30 months of age. Pediatrics. 2007;120:e953-e959.
- 3 UNICEF / WHO. Breastfeeding Advocacy Initiative. For the best start in life. UNICEF and WHO Publications. February 2016.
- 4 Nyqvist KH et al. The development of preterm infants' breastfeeding behavior. Early Human Development. 1999;55(3):247-264.