Breastmilk banking and the Mercy Health experience

Breastmilk banking provides an alternative to infant formula, not a substitute for mother's own milk

Breastmilk banks collect, process, store and distribute donated human milk for hospitalised premature and growth-restricted infants. Pasteurised donor human milk (PDHM) as an alternative to artificial formula when mother's own milk is unavailable is not a new concept. Before infant formula became widely available, milk sharing and wet nursing were common practices in Australian maternity wards in the 1940s. Concerns regarding transmission of infectious diseases in the 1980s saw breastmilk banks fall out of favour. With improved screening, storage and handling procedures, and evidence surrounding the importance of breastmilk in human development, breastmilk banking has re-emerged as a viable option when the supply of mother's own breastmilk is insufficient. Insufficient supply may occur because of maternal illness, medications or difficulties in establishing or maintaining lactation. Some 450 breastmilk banks exist internationally and the numbers are rising.

Infant feeding guidelines from the World Health Organization[1] and the National Health and Medical Research Council[2] recommend exclusive breastfeeding for the first 6 months of life. When this is not possible, the alternatives are either expressed donor breastmilk or formula milk. Given that artificial formula cannot provide many benefits beyond basic nutrition, the American Academy of Pediatrics states that PDHM should be first choice for preterm infants when there is insufficient mothers' own milk.[3] Evidence shows that compared with formula, donor human milk is associated with a lower incidence of necrotising enterocolitis and other infections during initial hospitalisation.[1]

In Australia, five recognised facilities currently exist, led by the establishment of the Perron Rotary Express Milk Bank in 2006, at the King Edward Memorial Hospital in Western Australia. Although there are no universal Australian guidelines governing practice, most centres adhere to the 2010 United Kingdom National Institute for Health and Care Excellence (NICE) guidelines for the operation of donor breastmilk banks,[4] which include donor screening recommendations. In 2014, the Australian government published an examination of donor human milk banking in Australia,[5] comprehensively reviewing the evidence, quality assurance and regulatory issues surrounding risk management and quality control. The report concluded that voluntary regulation guided by existing legal frameworks is sufficient and appropriate.

"donated milk provides preterm neonates with essential nutritional requirements for growth and neurological development"

Vikram Palit
MB BS, BMedSc

Gillian F Opie
MB BS, IBCLC, FRACP

Mercy Hospital for Women, Melbourne, VIC.

gopie@mercy.com.au

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Current international guidelines recommend pasteurisation of donor human milk to minimise the risk of disease transmission by inactivating most viral and bacterial contaminants. Additionally, screening is recommended for donors, similar to that for routine blood donation. Minimum serological standards include testing for HIV-1, HIV-2, hepatitis B and C virus, human T-lymphotropic virus types 1 and 2, and syphilis, as recommended by the Australasian Tissue Banking Forum.[6]

2015 marks the fifth year of operation for the Mercy Health Breastmilk Bank (MHBMB). As Victoria's first breastmilk bank, founded in 2011, and the second largest of its type in Australia, this service continues to grow, providing for extremely sick and premature babies born at Mercy Hospital for Women in Melbourne.

Since conception in 2011, the MHBMB has collected over 1551 litres of PDHM, received from 162 mothers, supplying 276 babies. Following international criteria, neonates born before 34 weeks' gestation or weighing less than 1500 g at birth are eligible for PDHM. Last year alone, over 254 litres of donor milk was consumed by babies cared for at Mercy Hospital for Women.

The MHBMB collects, screens, pasteurises and stores donor milk according to NICE guidelines. With parental consent, PDHM is available to babies in the special care nursery and intensive care unit, usually as a bridging supply until mothers' own milk becomes sufficient. This donated milk provides preterm neonates with essential

nutritional requirements for growth and neurological development, and human specific proteins and immunoglobulins for protection against infectious disease and immunity against other disorders.[5,6]

The MHBMB currently relies on donated breastmilk from mothers who have recently given birth at Mercy Hospital for Women. Our future hope is to include new mothers around Victoria and provide PDHM to eligible infants in other Victorian tertiary nurseries.

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References are available online at www.mja.com.au.

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