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Does discarding the first few millilitres of breast milk improve the bacteriological quality of bank breast milk?

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SUMMARY The bacteriology of 20 paired samples of breast milk was analysed to find out if discarding the first few millilitres would reduce the amount of bacterial contamination in breast milk donated to a hospital milk bank. The first sample was the initial 2–3 ml collected from the opposite breast to that first suckled by the baby, and the second was a midstream sample from the same breast. There was no significant difference in the colony counts between the paired samples, and in no instance did the bacterial flora of the second sample differ from that of the first.

In collecting breast milk for human milk banks an important practical question that is often asked, does discarding the initial few millilitres of milk before the definitive collection begins yield a bacteriologically clearer milk?[1] Williamson *et al.*,[2] referring to the work of West and Hewitt,[3] proposed that mothers should discard the first 5–10 ml. This might be appropriate for milk banks that rely mainly on milk collected from mothers at home when lactation is well established. However, many milk banks, of which ours is an example, generally use milk which is collected from early lactating mothers who are still in hospital. In such circumstances discarding the first few millilitres would greatly reduce the amount of milk available for babies.

Materials and methods

The milk bank of the Leicester Royal Infirmary Maternity Hospital is mainly stocked from milk which drips from the opposite breast during lactation and collected in a shell. In this study two samples of breast milk were collected from 20 mothers between 4 and 7 days after delivery: the first sample was the initial 2–3 ml which were collected from the opposite breast to that first suckled by the baby; the second was a midstream sample from the same breast. Each milk sample was

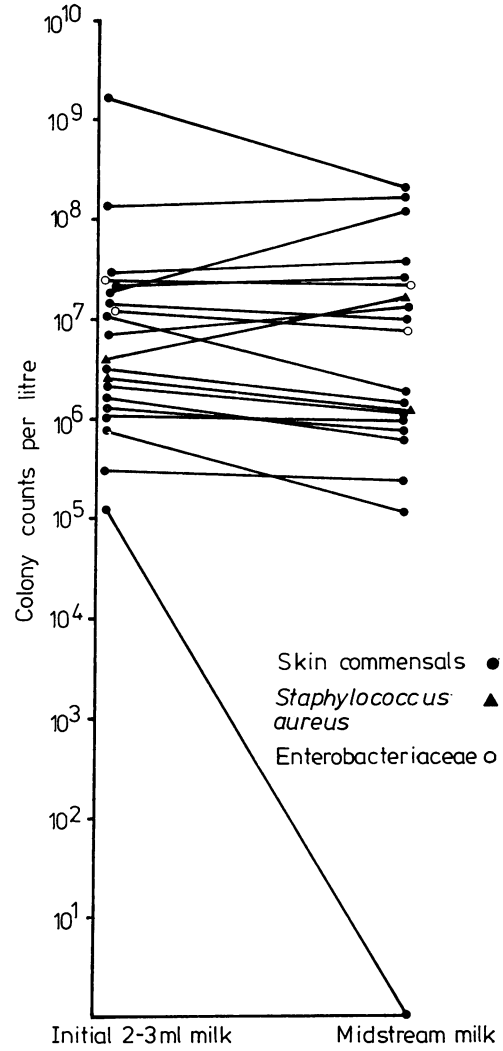

Figure *Bacterial colony counts in 20 paired samples of donated breast milk.*

collected into a sterile universal container. Skin antiseptics were not applied to the breasts and no mother was taking antibiotics. The breasts were frequently washed with soap and water. The milk samples were delivered to the laboratory and dealt with immediately. Serial dilutions of milk between 10^{-1} and 10^{-4} were made in nutrient agar (Oxoid), using a semiautomated diluter, and after overnight incubation at 37°C the bacterial species and number of colony forming units per litre were determined. Student's paired *t* test was used to measure the significance of differences in colony counts between the two milk samples.

Results

The Figure shows the bacterial colony counts in the samples of breast milk. There was no significant difference between the colony counts of the paired samples, and in only one instance did the bacterial flora of the second sample differ from that of the first.

Discussion

West and Hewitt[3] showed that 10 ml milk needs to be discarded before the bacteriological quality of the milk improves significantly. Our study shows the futility of discarding the first 2–3 ml while collecting breast milk for banking. We conclude that milk banks whose milk derives mainly from early lactating mothers should not discard the first part of the milk collected, as this will appreciably reduce the quantity of the milk without bacteriological advantage.

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Visual deterioration as presentation of subacute sclerosing panencephalitis

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SUMMARY A 7-year-old boy presented with deteriorating vision and macular degenerative changes. A month later he had developed unusual behaviour and increasing forgetfulness. An electroencephalogram showing periodic complexes, and high measles complement-fixation titres in the cerebrospinal fluid and blood, confirmed the diagnosis of subacute sclerosing panencephalitis. Four months after the onset of visual symptoms he started having myoclonic jerks.

A focal chorioretinitis has been described frequently in patients with subacute sclerosing panencephalitis (SSPE).[1] However, visual symptoms preceding the more common features of the disease—myoclonic jerks, mental deterioration, and progressive motor deficit—are rare.[2–5] We report the case of a child referred because of visual problems noted at school.

Case report

A 7-year-old boy was referred by his school to an ophthalmologist because he had been complaining for 2 months that he found it difficult to see his schoolwork. His visual acuity was assessed at 6/60 in both eyes. Bilateral macular degenerative changes were seen and thought consistent with a dystrophy.

On review one month later his mother's chief concern was an alteration in his behaviour. He had become increasingly forgetful, failing to complete simple tasks at home. The school reported him to be vague and not learning as well as previously. At this stage he was referred to the neurology clinic at this hospital.

He presented as co-operative and alert but had difficulty understanding straightforward requests during the examination. He was unable to perform simple calculations or to give his address. Physical examination was normal, apart from the eye findings. Pupils were equal and reacted to light. Fields were difficult to test because of his lack of understanding but peripherally they appeared to be intact. Visual acuity was estimated at less than 6/60 bilaterally on formal testing, but at 6/24 with pictures. On fundoscopy the discs appeared normal. The right macular area showed an outer irregular dark pigmented area surrounding a light central 'hole'.