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1: [J Clin Microbiol.](#) 2001 Jan;39(1):293-7.



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Outbreak of necrotizing enterocolitis associated with *Enterobacter sakazakii* in powdered milk formula.

[van Acker J](#), [de Smet F](#), [Muyldermans G](#), [Bougatef A](#), [Naessens A](#), [Lauwers S](#).

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We describe an outbreak of necrotizing enterocolitis (NEC) that occurred in the neonatal intensive care unit of our hospital. A total of 12 neonates developed NEC in June-July 1998. For two of them, twin brothers, the NEC turned out to be fatal. *Enterobacter sakazakii*, a known contaminant of powdered milk formula, was isolated from a stomach aspirate, anal swab, and/or blood sample for 6 of the 12 neonates. A review of feeding procedures revealed that 10 of the 12 patients were fed orally with the same brand of powdered milk formula. *E. sakazakii* was isolated from the implicated prepared formula milk as well as from several unopened cans of a single batch. Molecular typing by arbitrarily primed PCR (AP-PCR) confirmed, although partially, strain similarity between milk and patient isolates. No further cases of NEC were observed after the use of the contaminated milk formula was stopped. With this outbreak we show that intrinsic microbiological contamination of powdered milk formula can be a possible contributive factor in the development of NEC, a condition encountered almost exclusively in formula-fed premature infants. The use of sterilized liquid milk formula in neonatal care could prevent problems with intrinsic and extrinsic contamination of powdered milk formula.

PMID: 11136786 [PubMed - indexed for MEDLINE]

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