

## LONG-TERM FOLLOW-UP AFTER NEONATAL COLONIZATION WITH EXTENDED SPECTRUM BETA-LACTAMASE GRAM-NEGATIVE BACTERIA

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**Objective:** Neonatal colonization of the gut with multiresistant (ESBL= Extended spectrum beta-lactamase) gram-negative bacteria has become more common in recent years. The aim of this study was to investigate whether neonatal ESBL colonization becomes long-lasting or disappears.

**Methods:** Follow-up study of a cohort (13 infants, 7 boys, 10 preterm) born 2008-2009 in Stockholm and colonized during neonatal intensive care with the same clone of *Klebsiella pneumoniae*-ESBL, as determined by PFGE. Stool cultures were performed every second month after hospital discharge until 2 years of age.

**Results:** Co-colonization of the gut with *E.coli* ESBL was seen in 9 children. Four children remained ESBL-positive at two years of age. One child was ESBL-positive at final follow-up preceded by 3 subsequent negative cultures. Two children had a negative culture at two years of age but had been ESBL-positive in one or more of the preceding 3 cultures. Six children had 3 or more subsequent negative cultures and remained culture negative at the last sampling occasion. One patient with severe lung disease died. During the 2-year follow-up, one infant was treated for a lower urinary tract infection caused by *K.pneumoniae*-ESBL. No other infection caused by ESBL-producing bacteria occurred.

**Conclusion:** Neonatal colonization with ESBL-producing gram-negative bacteria may be a transient condition for some infants, but results in long-lasting colonization or re-colonization in about 50%. No infant suffered from serious infection caused by ESBL-producing bacteria during the follow-up.