Chlorhexidine vaginal flushings versus systemic ampicillin in the prevention of vertical transmission of neonatal group B streptococcus, at term.

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Abstract

OBJECTIVE:

To investigate the efficacy of intrapartum vaginal flushings with chlorhexidine compared with ampicillin in preventing group B streptococcus transmission to neonates.

METHODS:

This was a randomized controlled study, including singleton pregnancies delivering vaginally. Rupture of membranes, when present, must not have occurred more than 6 h previously. Women with any gestational complication, with a newborn previously affected by group B streptococcus sepsis or whose cervical dilatation was greater than 5 cm were excluded. A total of 244 group B streptococcus-colonized mothers at term (screened at 36-38 weeks) were randomized to receive either 140 ml chlorhexidine 0.2% by vaginal flushings every 6 h or ampicillin 2 g intravenously every 6 h until delivery. Neonatal swabs were taken at birth, at three different sites (nose, ear and gastric juice).

RESULTS:

A total of 108 women were treated with ampicillin and 109 with chlorhexidine. Their ages and gestational weeks at delivery were similar in the two groups. Nulliparous women were equally distributed between the two groups (ampicillin, 87%; chlorhexidine, 89%). Clinical data such as birth weight (ampicillin, 3,365 +/- 390 g; chlorhexidine, 3,440 +/- 452 g), Apgar scores at 1 min (ampicillin, 8.4 +/- 0.9; chlorhexidine, 8.2 +/- 1.4) and at 5 min (ampicillin, 9.7 +/- 0.6; chlorhexidine, 9.6 +/- 1.1) were similar for the two groups, as was the rate of neonatal group B streptococcus colonization (chlorhexidine, 15.6%; ampicillin, 12%). Escherichia coli, on the other hand, was significantly more prevalent in the ampicillin (7.4%) than in the chlorhexidine group (1.8%, $p < 0.05$). Six neonates were transferred to the neonatal intensive care unit, including two cases of early-onset sepsis (one in each group).

CONCLUSIONS:

In this carefully screened target population, intrapartum vaginal flushings with chlorhexidine in colonized mothers display the same efficacy as ampicillin in preventing vertical transmission of group B streptococcus. Moreover, the rate of neonatal E. coli colonization was reduced by chlorhexidine.

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