

Neonatal vomiting correlated with early cord clamping.

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Method

We defined late cord clamping [LCC] as cord clamping after complete placental transfusion, which takes about five minutes after a vaginal delivery in term infants. We defined early cord clamping [ECC] as cord clamping within one minute, which is the current practice in Obstetrics. We observed term and vaginal delivery infants from July to October 2012 in Dong Chang Maternal and Child Hospital, Shandong province, China. 47 infants were LCC and 78 infants were ECC according to their parents permission. All babies were observed after breast milking. Vomiting of infants were determined by both direct observation of midwifery staff and by reports of their parents within a month.

Results

There were 47 neonates allocated to receive LCC as group A, and 78 to receive ECC as group B. 4 baby were recorded to vomit in group A whereas there were 63 in group B.

	Vomiting	No vomiting
Group A [LCC]	4	43
Group B [ECC]	63	15

Statistical analysis Very significant difference ($P < 0.01$)

Conclusion

This trial indicated neonatal vomiting correlated with early cord clamping.

Discussion

The colloid osmotic pressure [COP] of blood in pregnant women is lower than that in nonpregnant women due to the high level of circulating progesterone which results in sodium and water reabsorption[. So they are also lower in every fetus. It cause fetus has high fluids content which about 80% of his body weight. It's not only met the needs of access nutrients by exchange at placenta in fluids, but inhibits unnecessary activities of fetal organs which caused by edema as well. That's why fetus has no gastrointestinal function. But neonatal gastrointestinal function must have, or will not survive. Therefore, the fetal excessive fluids included gastrointestinal tissue must be completely excreted as soon as possible.

Placental transfusion stretching the atria, stimulating it secreting a large number of atrial natriuretic peptide [ANP]. ANP is the most powerful natriuretic and diuretic. This results in a rapid excretion of sodium, water and a rise in colloid osmotic pressure. The increased colloid osmotic pressure leads to a movement of water out of the extracellular compartment. Gastrointestinal edema resolves and normal postnatal function is possible. Early cord clamping prevents the normal placental transfusion and results in a failure of atrial distension and the production of ANP. The gastrointestinal system edema fails to totally resolve and this decreases accommodate functions of the stomach. Thus vomiting after breast milk more likely occur.