



## **Influence of mode of delivery with anesthesia and low hemoglobin postpartum on early breastfeeding after birth**

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### **Introduction**

Little information exists on the association between mode of delivery with anesthesia and low hemoglobin postpartum (pp) on early breastfeeding after birth. Thus, the objective of this study was to analyze this influence.

### **Patients and Methods**

A retrospective study was performed at the University Hospital of Zurich including data of 1893 women, who delivered term singletons from 01/08-03/09, stayed at least 2 days at the hospital and had no contraindications for breastfeeding. Delivery mode was categorized in spontaneous or assisted vaginal delivery and scheduled or urgent cesarean(C)-section. Need of anesthesia was classified in none, local, neuraxial or general anesthesia. Patients with a hemoglobin pp < 8,4g/dl received parental iron infusion. The influence on the following breastfeeding outcomes was analyzed: use of Maltodextrin (MD), bottle, pacifier or spoon and exclusive breastfeeding at discharge.

### **Results**

54% and 11% of the women had a spontaneous or assisted vaginal delivery; 18% and 17% delivered by scheduled or urgent C-section. No anesthesia was needed in 13%, whereas local, neuraxial or general anesthetics were applied in 27%, 59% and 2%, respectively. 12% had a parenteral iron therapy pp. Bottles, pacifiers and spoons were used in 39%, 10% and 45%, respectively. During hospital stay 58% of all children received at least once MD. At discharge 68% and 31% of all children were exclusively or partially breastfed. 1 % of women had weaned. Women with spontaneous vaginal delivery used significantly less MD, compared to assisted vaginal delivery or urgent C-sections, and less bottles, compared to any other mode of delivery. They breastfed significantly more exclusively at discharge than women with scheduled or urgent C-sections. Any need of anesthesia was significantly associated with use of MD. Women with parental iron infusion pp used significantly more bottles, spoons and MD and breastfed less exclusively at discharge. Multiple logistic regression analyses showed the following: Neuraxial anesthesia was significantly associated with use of MD (OR=1.633, 95%-CI: 1.071-2.491) and bottle (OR=1.716, 95%-CI: 1.072-2.748) compared to no anesthesia. Scheduled cesarean section was significantly associated with less use of MD (OR=0.528, 95%-CI: 0.327-0.853) compared to spontaneous vaginal delivery.



## Conclusions

Spontaneous vaginal delivery without any need for anesthesia and low blood loss seem to have the best requirements for successful breastfeeding early pp. Neuraxial anesthesia, higher blood loss and C-sections seem to be associated with more difficulties of breastfeeding initiation.