



## Respiratory morbidity in twins by birth order, gestational age and mode of delivery

Bricelj K, Tul N, Lasic M, Trojner-Bregar A, Verdenik I, Lucovnik M, Blickstein I

Department of Perinatology, Division of Obstetrics and Gynecology, University Medical Centre Ljubljana, Ljubljana, Slovenia

### Objective

To evaluate the incidence of respiratory morbidity in twins by gestational age, birth order and mode of delivery.

### Methods

All twin pregnancies, delivered before 37 weeks and registered in a national database, in the period 2003 to 2012 were classified into four gestational age groups: 33–36, 30–32, 28–29 and < 28 weeks. Outcome variables included transient tachypnea of the newborn (TTN), respiratory distress syndrome (RDS) and need for assisted ventilation.

### Results

A total of 1836 twins were born vaginally, and 2142 twins were delivered by caesarean section, for a grand total of 3978 twins. TTN did not appear to be related to birth order and to the mode of delivery. In contrast, RDS was more frequent among the second born twins in the vaginal birth groups born at 30–36 weeks [odds ratio (OR) 2.5, 95% confidence interval (CI) 1.2–5.1 and OR 2.0, 95% CI 1.2–3.5 for 33–36 weeks and 30–32 weeks, respectively], whereas this trend was seen in the caesarean birth groups born earlier (OR 3.8, 95% CI 1.1–13.0 for 28–29 weeks). Caesarean delivery significantly increased the frequency of RDS in twin A as well as in twin B compared with vaginal birth, but only at gestational ages < 30 weeks.

### Conclusion

Mode of delivery and birth order have a gestational age dependent effect on the incidence of RDS.