

## **Complications of vaginal delivery in monochorionic diamniotic twin pregnancies**

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### **Objective**

To assess the risks associated with vaginal management of delivery in uncomplicated monochorionic diamniotic (MCDA) twin pregnancies after 32 weeks of gestation. Comparison of perinatal outcomes, early perinatal morbidity and long-term morbidity of vaginally managed MCDA twin deliveries and deliveries managed by cesarean section.

### **Methods**

A retrospective analysis of 290 deliveries of MCDA twins after the 32 weeks of gestation at the Department of Obstetrics and Gynaecology of the Faculty of Medicine and Medical University Hospital Brno in the 10-year period between 2013 and 2022. The cohort of uncomplicated MCDA pregnancies consisted of 191 cases, of which 80 were managed by primary Cesarean section (41.2%) and 111 vaginal deliveries (58.8%). The outcome of the delivery was evaluated, as well as early neonatal complications (blood gas and Apgar score at the 5<sup>th</sup> minute < 5). Neonatal mortality and morbidity were also assessed.

### **Results**

Out of 111 vaginally managed deliveries, 93 deliveries were completed vaginally (83.8%), 17 deliveries ended by emergency Cesarean section (15.3%), and 1 delivery was performed by emergency Cesarean section on the second twin. There was no difference in blood gas pH between both groups. Apgar score at the 5<sup>th</sup> minute <5 occurred in 1 case (1%) in the group of vaginally managed deliveries. There were no cases with Apgar <5 in the group of primary Cesarean section. No cases of perinatal or neonatal death were described. There was no statistical difference in the need for intubation, prolonged ICU stay, or any other sign of adverse neonatal outcome in the newborns.

### **Conclusion**

Vaginal delivery of MCDA twin pregnancies is safe and is not associated with increased risk of complications. Intensive monitoring of both fetuses throughout labour and availability of neonatal care are prerequisites.