

## The relationship of maternal factors and obstetric complications with term singleton vs. term twin neonatal outcomes: A retrospective study in China

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**Introduction & Aim:** A hospital based retrospective study was conducted to determine the relationship of maternal factors and obstetric complications with term singleton vs. term twin neonatal outcomes in Renmin Hospital, Wuhan University, Hubei, China during 2013- 2017.

**Method:** A total of 7956 neonatal births were recorded and were further divided into singleton (n=7787) and twins (n=169) birth. All the data was collected and documented in the obstetrics register by trained nurses during individual check-ups in the Gynecology and Obstetrics Department. Birth weight and birth length were measured immediately after birth.

**Results:** Women with singleton gestation have increased rate of obstetric complications when compared to women with twin gestation. However, higher frequency of cesarean section and breech were found in twin gestation compared to singleton gestation. Weight before pregnancy, gestational weight gain and gestational diabetes mellitus were significantly positive ( $p<0.05$ ) associated with singleton neonatal birth length and weight. In contrast, pre-eclampsia, placenta previa, oligohydramnios, premature rupture of membrane, breech and multiparity had significantly negative ( $p<0.05$ ) association with singleton neonatal birth length and weight. Maternal age was significantly positive ( $p<0.05$ ) associated with only singleton neonatal birth weight. Moreover, nuchal cord was significantly positive ( $p<0.05$ ) associated with neonatal birth length. On the other hand, maternal age and multiparity was significantly positive ( $p<0.05$ ) associated with twins neonatal birth length and weight. Furthermore, gestational weight gain was significantly positive ( $p<0.05$ ) associated with only twins neonatal birth weight.

**Conclusion:** It is concluded that in term gestation, maternal factors and obstetric complications was significantly associated with singleton birth weight and length. However, only maternal factors were significantly associated with twin neonatal birth weight and length rather than obstetric complications in term gestation. Furthermore, increased rate of obstetrical complications have found in women with singleton gestation compared to twin gestation.

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