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Induction of Labour In Growth Restricted and Small for Gestational Age Fetuses – A Historical Cohort Study

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Introduction In growth-restricted foetuses, close monitoring is mandatory and these pregnancies have to be stopped early. Induction of labour for a small-for-gestational-age (SGA) foetus or intrauterine growth restriction (IUGR) is common, but data are limited. Therefore, the aim of this study was to compare labour induction for SGA/IUGR with cases with normal fetal growth beyond the 10th percentile.

Material and methods This historical multicenter cohort study included singleton pregnancies at term between 2010 and 2015 at 2 tertiary perinatal centres. Labour induction for SGA/IUGR (IUGR group) was compared with cases of fetal growth beyond the 10th percentile (control group). Exclusion criteria included a previous caesarean section, premature rupture of the membranes, and fetal chromosomal or structural anomalies. Gestational age was calculated from the last menstrual period and confirmed by or recalculated with biometric measurements obtained from fetal biometry in early pregnancy. The Bishop score was assessed before induction. Primary outcome measure was caesarean section rate. Secondary outcome measures included the induction-to-delivery interval, the rate of vaginal deliveries within 24 and 48 h, failed labour induction (defined as no vaginal delivery within 72 h) and neonatal outcome parameters (such as arterial umbilical cord pH and base excess as well as Apgar score at 5 min).

Results Overall, 2,330 cases were included (IUGR group: 120 women; control group: 2,210 women). The caesarean section rate was not different between the 2 groups (27.0 vs. 26.2 %, p = 0.9154). In the IUGR group, abnormal CTG was more common (30.8 vs. 21.9 %, p = 0.0214), and fetal blood analyses were conducted more often (2.5 vs. 0.5 %, p = 0.0261). There were more postpartum transfers to the NICU in the IUGR group (40.0 vs. 12.8 %, p < 0.0001), too. The other secondary outcome parameters did not differ, and these significant differences could not be verified for the subgroup of multiparous women.

Conclusion Induction of labour for fetal growth restriction was not associated with an increased rate of caesarean section. Therefore, induction of labour in this population is a possible option, bearing in mind the higher risk for abnormal CTG.

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