Periviable cesarean deliveries: incidence and risk factors of complications

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Objective
To study the incidence of intraoperative surgical complications in cesarean sections performed before 26 weeks of gestation compared to those performed after, and to identify risk factors of complications in periviable cesarean deliveries.

Methods
We conducted a retrospective cohort study in a tertiary care unit between 2007 and 2015. All cesarean sections performed in the study period were included. Two groups were formed by gestational age at delivery: first was 24 to 25+6 weeks of gestation and second was 26 to 27+6 weeks of gestation. Maternal, neonatal, obstetric factors and intraoperative complications were studied and Student test, Fisher test and X² test were used for statistical analysis. To identify risk factors of complications, we used univariate and multivariate analysis with composite criteria of maternal morbidity.

Results
During the study period, we included 62 cesarean section in the first group and 176 in the second group. Cesarean section in first group between 24 and 25, 6 weeks of gestation was associated with a higher rate of corporeal incision (27.4% compared with 12.5%, p=0.024), post partum hemorrhage (20.9% compared with 9.1%, p=0.014), and difficulty of fetal extraction (14.5% compared with 5%, p=0.017). Operative time was longer in first group (47 minutes compared with 39 minutes, p=0.028) and neonatal mortality was lower in second group (46.3% compared with 6.6%, p<0.01). By multivariate analysis, we identified risk factors of complications: gestational age before 26 weeks of gestation (OR 5.54 [2.55-12.03]), singleton pregnancies (OR 14.38 [1.28-160.08]) and non-cephalic presentation (OR 4.01 [2.02 – 7.95]).

Conclusion
Maternal morbidity is more important when cesarean section is performed before 26 weeks of gestation. Risk factors for complications are gestational age before 26 weeks of gestation, singleton pregnancy and non-cephalic presentation. In view of these results, cesarean section for fetal indication should be discussed before 26 weeks of gestation.