Induction of labour in pregnancies complicated by late-onset foetal growth restriction: an observational study on perinatal outcomes

Francesca **Pometti** [1,2], Daniele **Farsetti** [1,2], Giulio Maria **Natali** [1,2], Barbara **Vasapollo** [1,2], Herbert **Valensise** [1,2]

[1] Tor Vergata University, Rome, Italy.
[2] Policlinico Casilino, Rome, Italy.

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Objective. To observe adverse perinatal outcomes in a population of pregnancies with late-onset FGR undergoing induction of labour.

Materials and Methods. 66 pregnant women with late-onset FGR who underwent induction of labour with misoprostol were enrolled. Before delivery we collected data about the estimated foetal weight and maternal haemodynamic evaluation with USCOM method.

Results. 24 patients underwent vaginal instrumental deliveries or urgent C-section for pathological cardiotocography during labour. A higher proportion of multiparous women developed adverse perinatal outcomes (96% *vs* 64%, p = 0.004), these patients showed also an increased BMI (27 ± 3.3 *vs* 25 ± 3.1, p = 0.03) compared to patients with uncomplicated outcomes. The neonatal birth weight percentile appears to be significantly lower in the first group of patients with 88% of cases below the 10th percentile (88% *vs* 62%, p = 0.03). Maternal haemodynamic evaluation showed an hypodynamic circulation with increased values of mean arterial pressure (MAP) (88 ± 12.2 *vs* 82 ± 8.9, p = 0.01), systemic vascular resistances (SVR) (1,072 ± 251.7 *vs* 942 ± 216.9, p = 0.03) and PKR (23 ± 7.9 *vs* 20 ± 6.6, p = 0.05) in patients who had worse outcomes. ROC curve analysis was performed for BMI and haemodynamic parameters to test the predictive capacity of these variables to identify patients at risk of develop adverse perinatal outcomes.

Conclusions. BMI (OR 4.25, p < 0.01) and SVRI (OR 16.88 p < 0.01) seem to be independent predictors of adverse perinatal outcome in pregnancies with FGR underwent induction of labour.