Safety of PGE2 induction of labor: results of a multicenter observational study

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Objective. Induction of labor with dinoprostone is associated with an increased risk of disseminated intravascular coagulation (IDC) in women aged ≥ 35 years and in pregnancy at gestational age (GE) ≥ 40 weeks. The AIFA note of July 21 emphasizes the risk of tachysystole associated with the use of dinoprostone. The primary objective of this study was to evaluate the prevalence of IDC in patients older than 35 years or that are ≥ 40 weeks of GE. The secondary objective was to evaluate the safety of induction of labour (IOL) with dinoprostone (PGE2) in this class of patients.

Materials and Methods. A multicentre, retrospective, observational study on 1486 singleton pregnancies who underwent IOL with PGE2 (either vaginal gel or slow-release insert). Data regarding maternal demographics, medical and obstetrical history, and pregnancy outcome were collected. Statistical significance was evaluated through chi-square test.

Results. IDC occurred in 0 patients. Tachysystole occurred in 79 patients (5.3%); of these, 14 (0.9%) needed treatment and 27 (1.8%) underwent emergency caesarean section. 41 (2.8%) babies were born with a cord pH ≤ 7.1 and 20 (1.3%) with a 5th minute Apgar ≤ 7. Maternal age ≥ 35 years was significantly associated with treated tachysystole. GE ≥ 40 weeks was significantly associated with tachysystole and 5th minute Apgar ≤ 7.

Conclusions. IDC is a rare occurrence. The prevalence of PGE2-related tachysystole and its consequences is higher in patients who are older than 35 years or GE ≥ 40 weeks. Research should be encouraged regarding pharmacokinetics and pharmacodynamics in pregnancy, particularly at an advanced age, given the differences recorded in physiological response to drugs.