

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

Rosamaria **Pellegrini**<sup>1,\*</sup>, Francesca **Monari**<sup>1</sup>, Chiara **Bettini**<sup>2</sup>, Enrico **Tartarotti**<sup>2</sup>, Serena **Lecis**<sup>1</sup>, Sara **Lazzarin**<sup>1</sup>, Viola **Vargiu**<sup>2</sup>, Mariarosaria **Di Tommaso**<sup>2</sup>, Fabio **Facchinetti**<sup>1</sup>

<sup>1</sup>Obstetrics and Gynecology Unit, Mother-Infant and Adult Department of Medical and Surgical Sciences, University of Modena and Reggio Emilia, Modena, Italy.

<sup>2</sup>Department of Health Sciences, Division of Obstetrics and Gynecology, University of Florence, Florence, Italy.

DOI: 10.36129/jog.2022.S83

**Objective.** Induction of labor with dinoprostone is associated with an increased risk of disseminated intravascular coagulation (IDC) in women aged  $\geq 35$  years and in pregnancy at gestational age (GE)  $\geq 40$  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  $\geq 40$  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 sig-

nificance 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  $\leq 7.1$  and 20 (1.3%) with a 5<sup>th</sup> minute Apgar  $\leq 7$ . Maternal age  $\geq 35$  years was significantly associated with treated tachysystole. GE  $\geq 40$  weeks was significantly associated with tachysystole and 5<sup>th</sup> minute Apgar  $\leq 7$ .

**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  $\geq 40$  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.