Comparison between commercial product of oral misoprostol and vaginal dinoprostone for induction of labor

Irene **Renda** [1,*], Eleonora **Romani** [1], Maria **Volotovskaya** [1], Milo **Giani** [1], Sara **Bolzonella** [1], Sara **Zullino** [2], Sara **Clemenza** [2], Silvia **Vannuccini** [2], Caterina **Serena** [2], Serena **Ottanelli** [2], Marianna Pina **Rambaldi** [2], Serena **Simeone** [2], Felice **Petraglia** [1], Federico **Mecacci** [2]

[1] Obstetrics and Gynaecology Unit, Department of Experimental and Clinical Biomedical Sciences, University of Florence, Florence, Italy.

[2] High Risk Pregnancy Unit, Department for Women and Children Health, Careggi University Hospital, Florence, Italy.

DOI: 10.36129/jog.2022.S82

Objective. It is known that galenic oral misoprostol is the most effective prostaglandin in terms of vaginal delivery achievement and the safest one in terms of caesarean section (CS) risk. However, there are only few data regarding the new commercial formulation. Our objective was to compare the efficacy and safety of the oral misoprostol commercial product and vaginal dinoprostone.

Materials and Methods. Monocentric, retrospective study on 186 patients with singleton term pregnancies undergoing labor induction at Careggi University Hospital, Florence, from 2020 to 2022: 93 cases received oral misoprostol commercial formulation 25-50 μg (maximum 200 μg/day), based on BMI, and 93 vaginal dinoprostone 1-2 mg (maximum 6 mg/day) or 24-hour slow-release pessary. The two groups were homogeneous for age, BMI, gestational age and parity.

Results. We observed no differences in CS rate, adverse fetal outcomes (low Apgar index, base excess, TIN admission) and uterine hyperstimulation rate. Dinoprostone was associated with a higher rate of major postpartum haemorrhage (PPH) (55% *vs* 24%, p = 0.05). Time to labor and delivery were similar, with a higher percentage of labor failed achievement in the dinoprostone group (11% *vs* 3%, p = 0.04). Consequently, dinoprostone more frequently required further induction with oxytocin than misoprostol (67% *vs* 43%, p = 0.03), whereas oxytocin augmentation rates were similar. Dinoprostone showed an increased, but not significant, tendency to hyperstimulation with abnormal fetal heart-rate.

Conclusions. Our results confirmed data regarding galenic misoprostol efficacy and safety. Indeed, misoprostol commercial formulation resulted more effective in labor induction than dinoprostone. No difference in safety was found between the two products except for major PPH.