Labor induction with misoprostol 25 µg versus misoprostol 50 µg in patients with term premature rupture of membranes

Elena Malesci 1,*, Beatrice Camardella 1, Gianmarco Ferente 1, Maria Simona Caime 1, Sofia Tignani 1, Emanuela Marinoni 2

1 Department of Obstetrics and Gynecology, San Filippo Neri Hospital, University of Rome Tor Vergata, Rome, Italy
2 Department of Obstetrics and Gynecology, San Filippo Neri Hospital, Rome, Italy.

Objective. To compare two groups of patients with premature rupture of membranes (PROM) that underwent induction of labor (IOL) with misoprostol 25 µg and misoprostol 50 µg, respectively.

Materials and Methods. We conducted a single-center prospective cohort study in the gynecological unit of San Filippo Neri. Data were collected from 11/2021 to 08/2022 through a questionnaire. 167 patients with PROM were recruited. In 88 women spontaneous delivery occurred. 79 underwent IOL through misoprostol, which was administered according to two different protocols: 63 patients received misoprostol 25 µg, 16 received 50 µg. Outcomes were the time between PROM and delivery, between PROM and induction and between induction and delivery. Secondary outcomes were the rate of cesarean section and its indications.

Results. There was no statistically significant difference in the two groups in mean time between PROM and induction (P-value = 0.3772) and between induction and delivery (P-value = 0.2193). The mean time from PROM to delivery was significantly lower in the second group (P-value = 0.0435). There was no significant difference in the rate of cesarean section in the two groups (P-value = 0.78). There was no registration of Apgar Index < 7 at the 5th minute.

Conclusions. The comparison of the two groups showed similar efficacy and safety in both IOL schemes. However, the time between PROM and delivery appears to be shorter in patients induced with 50 µg misoprostol. This scheme has also proven to be positive for patients because of the lower number of CTG and administrations that allows women to rest more.