

# Intramuscular Progesterone After PPROM in Patients with Extreme Fetal Prematurity- A case-control pilot study

itamar Futterman<sup>1</sup>, Sarah Weingarten<sup>1</sup>, and Alexander Shilkrut<sup>1</sup>

<sup>1</sup>New York Medical College

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## Abstract

**Objective:** Compare pregnancy outcomes in patients with short cervix receiving vaginal progesterone, had preterm prelabor rupture of membranes (PPROM) and were switched intramuscular (IM) progesterone after PPROM, to historical data of patients with short cervix and PPROM who did not receive IM progesterone after PPROM. **Design:** A retrospective case control pilot study of singleton pregnancies complicated by short cervix, receiving vaginal progesterone, who subsequently had PPROM, and then switched to IM progesterone. **Setting:** All delivered at a regional perinatal and tertiary referral center, between 24-34 weeks of gestation, from January, 2015 to April, 2020. **Sample:** 11 singleton pregnancies complicated by short cervix, receiving vaginal progesterone, who subsequently had PPROM, and then switched to IM progesterone. **Methods:** Maternal and neonatal outcomes included gestational age at time of delivery, PPROM to delivery interval, chorioamnionitis, birthweight, APGAR score <7 at 1 and 5 minutes of life, NICU admission and significant fetal morbidity. Findings were compared to historical control. **Main outcome:** PPROM to delivery interval. **Results:** Our patient population was significantly more premature at time of PPROM diagnosis (mean  $21.4 \pm 2.4$  compared to  $31.5 \pm 1.125$  in the control group). The group who received IM progesterone after PPROM had a longer PPROM to delivery interval, higher mean birth weight. There were two cases of neonatal death in the IM progesterone group. **Conclusion:** Administration of IM progesterone supplementation in the patients with short cervix after PPROM before 28 weeks of gestation may result in pregnancy prolongation, especially to benefit from steroid administration to improve fetal lung maturity.

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Table 1- Demographics.docx available at <https://authorea.com/users/469112/articles/562203-intramuscular-progesterone-after-pprom-in-patients-with-extreme-fetal-prematurity-a-case-control-pilot-study>

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Table 2 outcomes.docx available at <https://authorea.com/users/469112/articles/562203-intramuscular-progesterone-after-pprom-in-patients-with-extreme-fetal-prematurity-a-case-control-pilot-study>