

Vaginal progesterone compared to intramuscular 17-alpha-hydroxyprogesterone caproate for prevention of recurrent spontaneous preterm birth in singleton gestations: a systematic review and meta-analysis

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DOI: 10.36129/jog.2022.S39

Objective. To evaluate the efficacy of vaginal progesterone compared with 17P in prevention of SPTB in singleton gestations with prior SPTB.

Materials and Methods. Searches were performed in electronic databases. No restrictions for language or geographic location were applied. We included all RCTs of asymptomatic singleton gestations with prior SPTB who were randomized for prophylactic treatment with either vaginal progesterone (intervention group) or intramuscular 17P (comparison group). The primary outcome was PTB < 34 weeks. The summary measures were reported as relative risk (RR) with 95%CI.

Results. Seven RCTs, including 1894 women were included in the meta-analysis. Women who received vaginal progesterone had a significantly lower rate of PTB < 37 weeks (36.2%

vs 46.4%, RR 0.78, 95%CI 0.69 to 0.87), PTB < 34 weeks (14.6% vs 19.9%, RR 0.73, 95%CI 0.57 to 0.95), and PTB < 32 weeks, compared to women who received intramuscular 17P. There were no significant differences in the rate of PTB < 28 weeks. The rate of women who reported adverse drug reactions was significantly lower in the vaginal progesterone group compared to the 17P group. Regarding neonatal outcomes, vaginal progesterone was associated with a lower rate of NICU admission compared to 17P. Perinatal mortality occurred in 11/492 (2.2%) in the intervention group vs 21/474 (4.4%) in the control group (RR 0.51, 95%CI 0.25 to 1.01).

Conclusions. Daily vaginal progesterone started at about 16 weeks is a better alternative to weekly 17P for prevention of SPTB in women with singleton gestations and prior SPTB, and should be preferred in this population.