PRETERM BIRTH

# Abstracts 9-17

## 9 Low dose aspirin for the prevention of recurrent preterm labor (APRIL): a randomized controlled trial

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**OBJECTIVE:** To evaluate the effectiveness of aspirin compared to placebo for the prevention of preterm birth (PTB) when initiated in early pregnancy in women with a previous spontaneous preterm birth (SPTB).

**STUDY DESIGN:** We performed a multicenter, double-blind, randomized controlled trial (APRIL, NTR 5675). We recruited women with a singleton pregnancy and a history of SPTB (singleton pregnancy 22+0 - 37+0 weeks) following either preterm prelabor rupture of membranes or spontaneous contractions. After informed consent, participants were randomly assigned to daily aspirin (80 mg) or placebo started between 8+0 and 16+0 weeks gestation. Treatment was continued until 36+0 weeks gestation or delivery. Primary outcome was PTB before 37+0 weeks gestation. Secondary outcomes included a composite of poor neonatal outcome (bronchopulmonary dysplasia, periventricular leukomalacia >grade 1, intraventricular hemorrhage >grade 2, necrotizing enterocolitis >stage 1, retinopathy of prematurity, culture proven sepsis or perinatal death). A sample of 384 women was required to detect a PTB reduction from 36 to 23% ($\alpha$-error 0.05, $\beta$-error 0.2). Analyses were performed by intention to treat.

**RESULTS:** Between May 2016 and June 2019, we randomly allocated 194 women to aspirin and 193 to placebo. The PTB rate was 21.2% in the aspirin group versus 25.4% in the placebo group (RR 0.83; 95% CI 0.58-1.2). SPTB occurred in 20.1% versus 23.8% of women (RR 0.84; 95% CI 0.58-1.2). For women who were ≥80% compliant with study medication, PTB rates were 18.5% versus 24.8% (RR 0.75; 95% CI 0.46-1.2). The poor neonatal outcome rate was 4.6% versus 2.6% (RR 1.79; 95% CI 0.61 to 5.3). There were no significant differences in maternal morbidities such as hypertensive disorders and postpartum hemorrhage.

**CONCLUSION:** Our data did not demonstrate a reduction of PTB in women with a previous SPTB who used aspirin 80 mg. The RR for PTB is comparable to larger studies on aspirin in other groups of women. A small reduction of PTB from aspirin in women with a previous SPTB cannot be excluded with the current sample size.

| Outcome | Aspirin (n=194) | Placebo (n=193) | RR (95% CI) |
|---|---|---|---|
| Preterm birth <37+0 | 41 (21.2%) | 49 (25.4%) | 0.83 (0.58-1.20) |
| Spontaneous | 39 (20.1%) | 46 (23.8%) | 0.84 (0.58-1.23) |
| Indicated | 2 (1.0%) | 3 (1.6%) | 0.66 (0.11-3.93) |
| Preterm birth <34+0 | 18 (9.3%) | 17 (8.8%) | 1.05 (0.56-1.98) |
| Preterm birth <28+0 | 7 (3.6%) | 5 (2.6%) | 1.39 (0.45-4.31) |
| Composite poor neonatal outcome | 9 (4.6%) | 5 (2.6%) | 1.79 (0.61-5.25) |
| **Women with ≥80% medication compliance** | | | |
| Preterm birth <37+0 | 23/124 (18.5%) | 30/121 (24.8%) | 0.75 (0.46-1.21) |

## 10 A randomized trial of 17-hydroxyprogesterone caproate to prevent preterm birth among women living with HIV

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**OBJECTIVE:** Women with HIV face an increased risk of preterm birth (PTB), the leading worldwide cause of child death. 17 alpha-hydroxyprogesterone caproate (17P) has been shown in some trials to reduce early delivery among women with a prior spontaneous PTB.

**STUDY DESIGN:** We conducted a randomized, double-masked, placebo-controlled trial of 17P among HIV-infected women attending public-sector antenatal care in Lusaka, Zambia. We excluded women with prior spontaneous PTB or multiple gestation. Participants were randomly allocated to receive weekly intramuscular injections of 250mg 17P or placebo, starting between 16 and 24 gestational weeks and continuing until 36 6/7 weeks, delivery, or stillbirth, whichever occurred first. The trial's primary outcome was delivery < 37 weeks or stillbirth at any gestational age. We compared the risk of pre-