Background

Preterm births have been a longstanding problem in the United States, accounting for approximately 12% of all deliveries. This rate is now slowly decreasing, due to a combination of efforts focused on the use of tocolytic agents for preterm labor, cerclage for cervical insufficiency, and reducing the numbers of multiple gestations from reproductive technology.

Several randomized clinical trials have supported the use of progesterone for the prevention of preterm birth in women found to have a short cervix, most commonly defined as ≤ 25 mm. Meis et al, performed a placebo-controlled randomized trial of 250 mg injections of 17-OHPC in women with a history of a previous preterm delivery and found a 34% reduction in the risk for recurrent preterm birth (Meis). In contrast, another randomized study focused on the use of 90 mg progesterone gel intravaginal treatment in women incidentally found to have a short cervix between 10-20 mm with no prior history of a preterm delivery and found a 45% reduction in birth before 33 weeks of gestation. (Hassan). In another study using 200 mg vaginal capsules in women found to have a cervical length of 15 mm or less prior to 25 weeks, there was a 44% reduction in the risk for spontaneous preterm birth before 34 weeks of gestation (Fonseca). These trials using two different preparations of progesterone, in addition to many subsequent trials, have led to management protocols that differ based on the patient’s prior history and short cervix found on a transvaginal ultrasound scan (ACOG, SMFM, Conde-Agudelo 2016).

One additional therapeutic approach in efforts to reduce the preterm delivery rate includes a surgical approach with a cervical cerclage. In women with a classic history of cervical insufficiency, the use of a cerclage is appropriate. However, the additional use of a cerclage in patients who are on 17-OHPC treatment for a prior preterm delivery, or in lieu of vaginal progesterone in those screened with a short cervix, is also acceptable but large randomized clinical trials are lacking. Nonetheless, several secondary analyses and meta-analyses have suggested that this additional treatment may be of benefit to those on 17-OHPC with a prior history of a preterm delivery or as an alternative to vaginal progesterone (SMFM, ACOG, Berghella, Conde-Agudelo 2013).
Obtain good history for all singleton gestations at the first visit.

No history of preterm delivery

Transvaginal cervical length screening - when available - once at 16-24 weeks

CL>25mm → Routine Obstetric Care

CL < 25mm → Vaginal Progesterone 90 mg gel or 200mg suppository

History of preterm delivery

17-OHPC weekly injections 16-36 weeks

Transvaginal cervical length screening once at 16-24 weeks

CL>25mm → Continue 17-OHPC

CL < 25mm → Vaginal Progesterone 90 mg gel or 200mg suppository and DISCONTINUE 17-OHPC

History consistent with cervical insufficiency

Cerclage

Vaginal Progesterone 90 mg gel or 200mg suppository and DISCONTINUE 17-OHPC

Offer cerclage and CONTINUE 17-OHPC
Preterm Labor Reduction Pathway

Notes:

1) Although some earlier recommendations have used a cutoff value of 20 mm or less for cervical length, more recent recommendations have focused primarily on 25 mm as a reasonable cutoff.

2) A single measurement appears to be equally effective as serial measurements for cervical length between 16-24 weeks. Repeat measurements are not necessary.

3) Although some reports suggest that cerclage may be equally effective as vaginal progesterone, there is no strong evidence to support cerclage over vaginal progesterone in patients with no prior history of a preterm delivery.

4) Women with possible, but not certain, cervical insufficiency can be monitored by cervical length measurements between 16-24 weeks.

5) Although there is some data to support vaginal progesterone in lieu of 17-OHPC, the current data is inconclusive.

References:


