**Antenatal Corticosteroids: Late Preterm**

**Patient at 34° to 36° weeks gestation**
- High likelihood of medically indicated or spontaneous delivery within the next 12 hours-7 days and less than 37 weeks?
- Viable singleton pregnancy?
- Reassuring fetal status?
- Stable maternal status?

**Administer Antenatal Corticosteroids**
Betamethasone 12mg IM q24 hours x 2 doses

- Contraindications to steroids?
- Suspected or confirmed clinical chorioamnionitis?
- Received one or more prior courses of antenatal corticosteroids?
- Pregestational diabetes mellitus?

**Eligible for ACS due to PPROM**
- Admit to labor and delivery
- Continuous EFM/toco
- Vaginal examination(s) only as clinically indicated
- Antibiotic treatment for GBS positive or GBS unknown
- "Latency" antibiotics and tocolysis not recommended
- Cervical ripening or labor augmentation should not be delayed more than 12 hours after first dose of ACS

**Eligible for ACS due to Preterm Labor**
- Admit to labor and delivery or antepartum as applicable
- Continuous EFM/toco
- Vaginal examination(s) only as clinically indicated
- Antibiotic treatment for GBS unknown
- Tocolysis not recommended

**Eligible for ACS due to PreEclampsia**
- Consider admission to labor and delivery or antepartum as applicable
- Magnesium sulfate for maternal seizure prophylaxis as indicated
- Timing of delivery should be dictated by obstetric condition, and should not be delayed based on decision to administer ACS or timing of ACS administration

**Eligible for ACS due to Other Indication**
- Examples of other indications include: prior classical cesarean section, placenta revia/accerta spectrum, severe fetal growth restriction, etc.
- Inpatient or outpatient management as applicable
- Ideally plan first does 2-7 days prior to cesarean section or labor induction

Abbreviations: ACS = antenatal corticosteroids; PPROM= preterm (rupture of membranes); EFM = electronic fetal monitoring; GBS = group B strep

*Preterm labor admission criteria in original study: at least 6 contractions in 60 minutes AND either ≥ 3 cm dilated OR ≥ 80% effaced*
Antenatal Corticosteroids in the Late Preterm Period-Notes and FAQ

- Q: Should a woman who is diagnosed with pre-eclampsia without severe features at 35 weeks be given ACS?
  - A: it is reasonable to consider ACS in this situation, if it is thought that there is a high probability that her clinical situation will worsen and she will need to deliver within 1 week. Clinical judgement should be used to decide the optimal timing of ACS administration, including whether or not it is indicated. If delivery is planned for 37 weeks gestation and low suspicion that her clinical condition will worsen. ACS may not be indicated.

- Q: Can a woman who is diagnosed with pre-eclampsia with severe features at 35 weeks be given ACS?
  - A: Yes, provided that it is anticipated that a minimum of 12 hours will elapse between first dose of ACS and delivery. In this situation, if the clinical condition warrants, it is reasonable to begin cervical ripening or labor induction at the time of diagnosis or hospital admission. Most women will remain undelivered 12 hours later, even if their labor induction is started at the time of admission. If cesarean delivery is anticipated, and a delay in delivery for at least 12 hours is contraindicated due to maternal and/or fetal status, then ACS should not be given.

- Q: Is maternal diabetes mellitus a contraindication to ACS use?
  - A: Women with pre-gestational diabetes mellitus were not included in the original study, and at this time, it is not recommended that they receive ACS at this gestational age. Women with gestational diabetes (even those requiring insulin) were not excluded from the RCT. Practitioners should remain vigilant regarding the potential for maternal hyperglycemia and adjust insulin doses in the short term (including initiation of an insulin drip or insulin sliding scale) as necessary to maintain euglycemia. Changes in insulin requirements may persist for up to 7 days following ACS administration.

- Q: Can a woman who previously received ACS <34 weeks be given another course of ACS?
  - A: No, The original RCT excluded women who previously received ACS<34 weeks gestation, and there is no evidence to support the use of rescue course ACS.

- Q: Should ACS be used in twin or higher order multiple gestations?
  - A: No. The original RCT excluded multiple gestations. At the current time, we do not recommend extrapolation to other populations including twins and other higher order multiple gestations.
- Q: What are the neonatal effects of antenatal corticosteroids at this gestational age?
  - The primary study found a reduction of neonatal respiratory morbidity, and a composite of severe neonatal respiratory morbidity, among neonates exposed to antenatal betamethasone vs. placebo. Importantly, this effect was seen despite only 60% of the study population receiving the 2nd dose of study drug.
  - The only apparent adverse effect was an increase in initial neonatal hypoglycemia (defined as neonatal blood glucose <40). However, this appeared to be self-limiting as neonates who received betamethasone had a shorter time to first feed and had a significantly shorter length of stay in the special care/ neonatal intensive care nursery. Pediatricians should be notified regarding antenatal administration of corticosteroids, and neonates should be monitored post-natally as appropriate. It is important to note that hypoglycemia is a common complication in the late preterm period.

References


Antenatal Betamethasone for Women at Risk for Late Preterm Delivery.

Society for Maternal-Fetal Medicine (SMFM) Publications Committee. PMID: 26992737

Revised: 04/25/2016 TAM

These algorithms are designed to assist the primary care provider in the clinical management of a variety of problems that occur during pregnancy. They should not be interpreted as a standard of care, but instead represent guidelines for management. Variation in practices should take into account such factors as characteristics of the individual patient, health resources, and regional experience with diagnostic and therapeutic modalities.

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