MATERNAL CORTICOSTEROIDS – CLINICAL GUIDELINES

ADMINISTRATION OF ANTENATAL STEROIDS	**CLINICAL GUIDELINES**
Professionally prepared by	**Dr Parveez Ahmed P** **Consultant Obstetric Anaesthetist**
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Policy to be followed by (target staff)	**Nurses, Obstetricians, Anaesthetists, Paediatricians**

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1. PURPOSE

1. Antenatal maternal administration of steroids in premature labour reduces the incidence of respiratory distress syndrome (RDS), necrotising enter colitis and intra-ventricular haemorrhage in neonates resulting in reduced perinatal mortality and morbidity rates.

2. RDS is known to affect 40-50% of babies born before 32 weeks gestation.
3. The efficacy of neonatal surfactant therapy is enhanced by antenatal exposure to corticosteroids
4. Clear benefits have been cited regarding the use of antenatal corticosteroids after prolonged premature rupture of membranes (PPROM).

2. INDICATIONS FOR ANTENATAL CORTICOSTEROIDS

1. Antenatal corticosteroid therapy in patients should be initiated between 24 weeks to 34 weeks and 6 days gestation with any of the following:
   • Threatened pre-term labour
   • Antepartum haemorrhage if considered to be at risk of preterm delivery
   • Preterm rupture of membranes
2. Most benefit is obtained in terms of reduced respiratory morbidity when delivery occurs between 24 hours and 7 days after administration of the second dose of steroids. Steroids should be given even if birth within 24 hours anticipated as they reduce neonatal death.
3. Steroids may be given between 23 weeks and 23 weeks and 6 days gestation if threatened preterm birth but should be a consultant decision.
4. Patients undergoing elective Caesarean section prior to 39 weeks gestation should be offered a course of steroids to reduce neonatal respiratory morbidity.
5. Prophylactic corticosteroids should not be offered routinely to women with multiple pregnancy or history of previous preterm birth without signs of being at risk of preterm birth.

6. Pregnancies affected by foetal growth restriction between 24 weeks and 0 days gestation and 35 weeks and 6 days gestation at risk of delivery should receive a single course of antenatal corticosteroids.

7. The risk of respiratory distress (RDS) at 37, 38 and 39 weeks gestation is 3.9, 3.0 and 1.9 respectively.

3. SINGLE RESCUE COURSE

WHO recommends that a single repeat course of steroids may be considered if preterm birth does not occur within 7 days after the initial course and subsequent assessment demonstrates that there is a high risk of preterm birth in the next 7 days.

The American College of Obstetricians and Gynaecologists recommends a single repeat course of antenatal corticosteroids in women who are at less than 34 weeks of gestation with a risk of preterm delivery within 7 days, and whose prior course of antenatal corticosteroids was administered more than 14 days ago.

4. CAUTIONS TO THE USE OF CORTICOSTEROIDS

1. A single course of antenatal corticosteroids does not appear to cause any significant maternal or foetal effects.
2. Caution should be used when giving steroids to women with active tuberculosis or sepsis. Corticosteroids may be given in overt chorioamnionitis but should not delay delivery if otherwise indicated.
3. Maternal diabetes is not a contraindication to steroid administration but close monitoring of blood sugars with a low threshold for insulin sliding scale is recommended.

5. DOSAGE AND ROUTE OF ADMINISTRATION

1. Betamethasone is the steroid of choice to enhance lung maturation.
2. **Prophylaxis** will take the form of a single course of:

   • Two doses of betamethasone 12 mg, given intramuscularly (IM) 24 hours apart

   • If delivery is expected within 12 hours, betamethasone 12mg IM should be given at an interval of 12 hours
3. In such circumstances where betamethasone is not available; dexamethasone can be administered in exactly the same dosage and route. Furthermore, if the first dose of betamethasone has been administered and subsequently becomes unavailable prior to the administration of the second dose; in this situation dexamethasone can be administered.

6. REFERENCES

1. Royal College of Obstetricians and Gynaecologists. (2010) Antenatal corticosteroids to reduce neonatal morbidity and mortality; Green-top Guideline 7; October; RCOG: London.

2. World Health Organization. *WHO Recommendations on Interventions to Improve Preterm Birth Outcomes*. Geneva: WHO; 2015.

3. American College of Obstetricians and Gynecologists' Committee on Obstetric Practice; Society for Maternal–Fetal Medicine. Committee Opinion No. 677: Antenatal corticosteroids therapy for fetal maturation. *Obstet Gynecol*. 2016;128:e187–e194.