

ANTENATAL CORTICOSTEROID THERAPY

Respiratory morbidity including respiratory distress syndrome (RDS) is a serious complication of preterm birth. It is the primary cause of early neonatal mortality and is associated with long term lung complications and poorer developmental outcomes. The administration of antenatal corticosteroids to accelerate lung maturity in women who are at risk of preterm birth is strongly associated with decreased neonatal mortality and morbidity and should be considered routine practice. Neonates whose mother received antenatal corticosteroids have significantly lower incidence and severity of RDS, intracranial haemorrhage, necrotising enterocolitis and death compared with neonates whose mothers did not receive antenatal corticosteroids. The full effect of steroids occurs 24 hours after the second dose is given and lasts for between 7-10 days only.

INDICATIONS FOR ANTENATAL CORTICOSTEROIDS

1. A single course of corticosteroids between 22+5 to 34+6 weeks of gestation to pregnant women who are at risk of preterm birth within 7 days.
2. Periviability (22+5 to 24+6 weeks gestation) - corticosteroids should be considered if active intervention at birth is the shared decision after joint consultation with the obstetric team, neonatal team and the parents.
3. A single repeat dose of antenatal steroid should be considered in women who are less than 34+6 weeks of gestation who are at risk of preterm birth within 7 days and whose prior course of antenatal steroids was completed more than 7-10 days previously.
4. All pregnant women undergoing elective caesarean section < 39 weeks should receive single course of corticosteroids and in diabetic mothers < 38 weeks.

PREGNANCY COMPLICATED BY DIABETES

Maternal blood sugar control can worsen during steroids so mothers should be admitted for steroids for blood sugar control. Consider steroids prior to caesarean section if < 38 weeks.

CORTICOSTEROIDS TREATMENT

1. Two doses of Betamethasone 11.4 mg given intramuscularly 24 hours apart (CDHB choice of steroid)
- or
2. Dexamethasone 6 mg given every 12 hours for a maximum of four doses

Treatment with steroids for less than 24 hours is still associated with significant reduction in neonatal morbidity and mortality. 1st dose of corticosteroids should be administered even if the ability to give 2nd dose of is unlikely. However, no additional benefit has been demonstrated for accelerated courses of steroids, ie. giving the doses 12 hourly instead of 24 hourly.

CORTICOSTEROIDS REPEAT DOSES

1. Use a single repeat dose of Betamethasone 11.4mg given intramuscularly
2. After this dose if a woman has still not given birth 7-10 days from the previous repeat dose and is still considered to be at risk of preterm birth within the next seven days, a further single repeat dose of Betamethasone 11.4mg given intramuscularly, can be administered
3. Up to a total of three single repeat doses can be given. However, if a woman remains at risk of preterm birth after receiving three repeat doses, discussion between the obstetric, neonatal teams and the parents should occur to weigh up the risks and benefits of further steroid doses.

REFERENCES

1. Antenatal corticosteroids given to women prior to birth to improve fetal, infant, child and adult health. NZ and Australian clinical practice guidelines 2015
2. ACOG committee opinion Number 713, August 2017
3. Guideline for the use of antenatal corticosteroids for fetal, Maturation J. Perinat. Med. 36 (2008) 191–196
4. Crowther CA, McKinlay CJD, Middleton P, Harding JE. Cochrane Database Syst Rev [internet]. 2015 [Cited 5 July 2015]. Available from https://www.cochrane.org/CD003935/PREG_repeat-doses-prenatal-corticosteroids-women-risk-preterm-birth-preventing-neonatal-respiratory
5. Roberts D, Brown J, Medley N, Dalziel SR. Antenatal corticosteroids for accelerating fetal lung maturation for women at risk of preterm birth. Cochrane Database of Systematic Reviews 2017, Issue 3. Art. No.: CD004454. DOI: 10.1002/14651858.CD004454.pub3

Date Issued: December 2018

Review Date: December 2021

Written/Authorised by: Maternity Guidelines Group, Clinical Director NICU

Review Team: Maternity Guidelines Group

Antenatal Corticosteroid Therapy

Maternity Guidelines

Christchurch Women's Hospital

Christchurch New Zealand