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In Response

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Caesarean < 39 weeks.[2] However, the number needed to treat, as calculated from the study data, is 54 for transient tachypnea of the newborn and 122 for respiratory distress syndrome. Further, there is no evidence that corticosteroid administration improves long term morbidity or mortality. If there is no clear improvement in long term postnatal outcomes, it can be argued that another benefit may be a reduction in resource utilization, as was indeed shown in the study. However, based on the numbers needed to treat above and given the large proportion of women who deliver at between 35 to 38 weeks, such a reduction in neonatal resource use would be vastly outweighed by the added visits for maternal counselling regarding antenatal corticosteroids, in addition to the two visits for injections. Although the recommendation states that the intervention "may be considered," in the absence of specific guidance about the cases likely to benefit there is no rational basis for a practitioner to decide whether corticosteroids should or should not be given in most cases.

To take this analysis further: if corticosteroid administration is beneficial to the neonate when Caesarean section is performed at 35 to 38 weeks, why should it not be beneficial if induction of labour is planned at the same gestational age? This is a common scenario for cases with maternal indications such as cholestasis or poorly controlled diabetes, obstetric indications such as preterm premature rupture of membranes or prelabour spontaneous rupture of membranes, and fetal indications such as gastroschisis or IUGR. This quite reasonable assumption has led some physicians to start considering antenatal corticosteroids in such cases too. Why would the same neonatal benefit not occur in cases with spontaneous labour at 35 to 38 weeks? In the absence of evidence to the contrary, should we consider corticosteroid administration for all deliveries at 35 to 38 weeks, planned or spontaneous? Should all women in latent labour at 35 to 38 weeks receive corticosteroids?

Although the safety concerns for babies exposed antenatally to corticosteroids should be similar in the post-34 weeks and 23 to 34 weeks groups, adverse effects including neurological, cardiovascular, and metabolic outcomes are possible.[3] The risk–benefit ratio may not be as favourable at 35 to 38 weeks as it is at 23 to 34 weeks. In addition, long term follow up data on postnatal outcomes when corticosteroids are administered after 34 weeks are limited. The effect of antenatal corticosteroids on brain development may depend on gestational age. It has been suggested that early exposure may only delay myelination, whereas exposure closer to term could potentially result in cell death.[3]

The forgoing discussion leads to the conclusion that there is a need for a recommendation regarding antenatal corticosteroids, particularly one that addresses pregnancies at 35 to 38 weeks. I feel that the recommendations regarding antenatal corticosteroids in this document[1] should be removed until a more comprehensive guideline targeting this topic becomes available. Guidance on use of antenatal corticosteroids is not essential to this document as their use is part of standard obstetric care.

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In Response

To the Editor:

We thank Dr Jain for his letter about the antenatal corticosteroid recommendation in the 2014 SOGC guidelines, "Antenatal corticosteroids may be considered for women delivered by elective Caesarean delivery at ≤ 38+6 weeks' gestation to reduce respiratory morbidity (1-B; low quality of evidence/weak recommendation)."[1,2] We would like to emphasize that the strength of the recommendation was graded as "weak," consistent with use of "may be considered" rather than "should be considered." The magnitude of bias introduced by lack of blinding in the trial of Stutchfield et al. is unknown, but the trial nevertheless provides randomized trial evidence supporting use of corticosteroids before elective Caesarean.[3]

We included information on antenatal corticosteroids for acceleration of fetal pulmonary maturity in our 2014 guideline after debate within the committee. In the end, we put more weight on having a guideline that was a comprehensive source of information for maternity care providers caring for women with a hypertensive disorder of

pregnancy (HDP), and less weight on mentioning aspects of care that are not the focus of HDP care. We were happy to reference other SOGC guidelines for detailed guidance about aspects of care that are not the focus of HDP care. However, the SOGC guideline on antenatal corticosteroids is out of date, having been published in 2002, and so we referenced more recent guidance related to care in the Royal College of Obstetricians and Gynaecologists Green-Top Guideline "Antenatal corticosteroids to reduce neonatal morbidity."[4]

We are uncertain why our recommendation ". . . has increasingly become a source of confusion for obstetricians and other practitioners involved in peripartum care of pregnant women." The guideline is specifically about the HDPs, and it would be repetitive to re-state in every section that recommendations pertain only to women with one or more of the HDPs. Also, if any woman requires delivery for maternal or fetal reasons, and waiting 24-48 hours after corticosteroid administration is not deemed to be of greater benefit than risk, the woman should be delivered. This is true at 28+4 weeks before an emergency Caesarean section (for eclampsia, for example) or at 38+4 weeks before an elective Caesarean section in a woman with chronic hypertension.

Dr Jain questions why antenatal corticosteroids would be beneficial before elective Caesarean section and not also for labour induction or even before spontaneous labour. The literature has already spoken to the benefits of labour in preparing the neonate for respiratory health postpartum, and administration of antenatal corticosteroids before something that is spontaneous (by definition) would represent not only an impossible challenge but one without supporting evidence. Importantly, there is no randomized trial evidence that pertains to delivery plans other than elective Caesarean section.

Where we agree wholeheartedly with Dr Jain is in the need for an updated guideline on antenatal corticosteroids, to which Dr Jain could contribute his knowledge of the topic. We will be happy to update our recommendation and reference that document when it is published.

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