"34 Weeks" of Gestation—Lost in Translation

To the Editor:

As part of the outcomes adjudication of the CHIPS (Control of Hypertension In Pregnancy) Trial, we noted that many of the patients were confirmed as having received antenatal corticosteroids near or at term. This was not consistent with guidance from the SOGC, which recommends a single course of antenatal corticosteroids for "all pregnant women between 24 and 34 weeks' gestation who are at risk of preterm delivery within 7 days . . .."[1] We reviewed other national guidelines for administration of antenatal corticosteroids prior to delivery, in an attempt to understand this variation in practice seen in CHIPS.

In the relevant 2010 Royal College of Obstetricians and Gynaecologists (RCOG) Green-top guidelines, antenatal corticosteroids are indeed recommended for women who are delivered by elective Caesarean section before 38+6 weeks.[2] As RCOG guidelines are widely read internationally and as the centres where these women delivered were international and not restricted to any particular region or country, this may explain some of the practice seen in the CHIPS Trial. As expected, antenatal corticosteroids were recommended for women at risk of iatrogenic or spontaneous preterm birth; however, the recommended gestational age range was specified as "up to 34+6 weeks." This led us to review those data in more detail.

The most up-to-date Cochrane review on a single course of antenatal corticosteroids for acceleration of fetal pulmonary maturity (2006) included 21 trials (3885 women, 4269 infants).[3] In this review, antenatal corticosteroids were shown to decrease neonatal mortality and morbidity. A post-hoc subgroup analysis by gestational age at trial *entry* found that corticosteroids administered at 33+0 to 34+6 weeks significantly reduced respiratory distress syndrome (RR 0.53; 95% CI 0.31 to 0.91). This could be interpreted as a beneficial effect of corticosteroids at "under 34 weeks," "less than or equal to 34 weeks and 6 days," or "less than 34 weeks and zero days." The authors of the RCOG Green-top guidelines chose to recommend administration of antenatal corticosteroids up to 34+6 weeks, as confirmed by the lead author on both that Cochrane review and the Green-top (RCOG) guidelines (personal communication, Devender Roberts, November 2, 2012). As with any recommendation, this one may be subject to change as new data emerge, including the results of a late preterm labour trial, ALPS (Antenatal Late Preterm Steroids). Until then, however, we believe that the Canadian clinical community should be using a cut-off of ≤ 34+6 weeks.

Is a change to a cut-off of ≤ 34+6 weeks for antenatal corticosteroids an important one when compliance with a ≤ 33+6 week cut-off is sub-optimal?[4] We believe that it is, not only to optimize outcomes but also to emphasize that we should say what we mean. In the realm of the hypertensive disorders, there are other examples of terms that mean different things to different people. For example, we persist in using terms like "PIH," which means gestational hypertension (without proteinuria) to some and preeclampsia to others; some use it to mean either. This lack of clarity is dangerous to women, fetuses, neonates, and science.

Is this discussion of systematic reviews and the RCTs that inform them relevant to the practising clinician? Yes, it is. First, none of us have time to search the literature for evidence for all questions, but each of us has questions that remain unanswered; those who have examined the evidence and distilled it for us in peer-reviewed publications have provided us with their email address so that we can correspond with them and so that they can obtain feedback. Second, our practice should be informed by the evidence and its limitations, recognizing that recommendations should change as evidence changes. Finally, whether we are discussing gestational age, gestational hypertension, or other aspects of pregnancy, we should use terms that are clear so that we can all understand and be understood.

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REFERENCES

1. Crane J; SOGC Maternal-Fetal Medicine Committee. Antenatal corticosteroid therapy for fetal maturation. SOGC Committee Opinion no. 122, January 2003. J Obstet Gynaecol Can 2003;25(1):45–52.

2. Royal College of Obstetricians and Gynaecologists. Antenatal corticosteroids to reduce neonatal morbidity and mortality. Green-top guideline no. 7, 2010. Available at: http://www.rcog.org.uk/womens-health/clinical-guidance/antenatal-corticosteroids-prevent-respiratory-distress-syndrome-gree. Accessed March 26, 2014.

3. Roberts D, Dalziel S. Antenatal corticosteroids for accelerating fetal lung maturation for women at risk of preterm birth. Cochrane Database Syst Rev 2006;3:CD004454.

4. Kazem M, Hutcheon JA, Joseph KS. A population-based study of antenatal corticosteroid prophylaxis for preterm birth. J Obstet Gynaecol Can 2012;34(9):842–8.

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