Reviewer's report

Title: Association between gestational age at birth, antenatal corticosteroids, and outcomes at 5 years: Multiple Courses of Antenatal Corticosteroids for Preterm Birth Study at 5 years of age (MACS-5)

Version: 2

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Reviewer: Cheong Rae R Roh

Reviewer’s report:

RE: Association between gestational age at birth, antenatal corticosteroids, and outcomes at 5 years: Multiple Courses of Antenatal Corticosteroids for Preterm Birth Study at 5 years of age (MACS-5)

In this study, the authors performed a secondary analysis of their previous randomized controlled trial and its follow-up evaluating the association between gestational ages at birth in children exposed to single versus multiple courses of antenatal corticosteroid (ACS) therapy in utero and outcomes at 5 years of age. The author’s hypothesis was that children born # 37 weeks and exposed to multiple ACS therapy may have an increased risk of neuromotor, neurosensory, and neurobehavioral/emotional impairment by 5 years of age.

Major Compulsory Revisions

1. In the result, the interaction of ACS group and gestational age at birth for neuromotor, neurosensory, and neurobehavioral/emotional impairment was not significant (p =0.064). However, there was a significant interaction of ACS group and gestational age at birth only for neurosensory disability (p = 0.021). From this statistical data, it is curious whether there is real interaction of ACS group and gestational age at birth only for certain portion of neurologic impairments or this result is only statistical phenomenon which is not clinically significant.

2. In Table 5, authors are short of explaining selection basis of covariates. There might have been so many pre-existing covariates to account for results as well as selected covariates. The authors also did not explain why several covariates (mother smokes , parity, country PMR) were omitted in the analysis of neurosensory disability.

Level of interest: An article of insufficient interest to warrant publication in a scientific/medical journal

Quality of written English: Acceptable

Statistical review: Yes, but I do not feel adequately qualified to assess the statistics.