Reviewer’s report

Title: The effect of twin-to-twin delivery time intervals on neonatal outcome for second twins

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Reviewer: Philippe DERUELLE

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This monocentric retrospective study aimed to analyze the effect of twin-to-twin delivery time intervals on a composite outcome defined as presence of metabolic acidosis, Apgar score < 4, and peri- and neonatal mortality.

A secondary outcome included the main neonatal complications.

The authors found that delivery of the second twin after 30 min was associated with an increased rate of the composite outcome - mainly an increased rate of neonatal acidosis.

This is a well-written paper, extremely clear and easy to read.

I have some comments and questions:

In the methods section:

1. Were twin-twin transfusion syndrom excluded? The authors should give the readers how many cases of TTS were included in this study and their impact on the results.

2. I found myself unable to understand the following sentence: Gestational age was based on a routine ultrasound examination, usually made in the second trimester. Does that mean that due date and chorionicity were not defined early by a first trimester ultrasonography between 11 and 14 weeks? This may lead to incorrect diagnosis of chorionicity and rough calculation of due date.
3. Did all obstetrician of the team applied the same (expectant) management for twin in the labour room? Were there some members of the team less patients than others?

In the results section:

527 twin pregnancies were included in this study. It would be interesting to know the number of all twin pregnancies managed in this center during the study period and the number of elective C-section.

Discussion

I would suggest the author to add a comment about the clinical significance of their results. Indeed, even if they found a difference on the composite outcome, the effect is mainly due to a decrease of umbilical artery pH. Their result is consistent with the previous published data.

The authors could also comment on the lack of association between neonatal morbidity criteria and twin-to-twin delivery interval time. Are these criteria relevant for this evaluation?

Tables and figures

Figures 1 and 3. I would suggest to define the x-axis legend as "categories of twin-to-twin delivery time intervals in min"

Figure 2. I would suggest to add "in min" on the x-axis
Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

Yes

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

Yes

Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.

Yes

Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I am able to assess the statistics

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