

Peer Review File

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Reviewer Comments

This is retrospective analysis of a cohort of multiparous women over a year in a particular geographic area whose next pregnancy outcomes were analyzed according to their previous mode of birth

It is called a review article when it is actually a retrospective cohort study

Reply: Thank you for your suggestions.

Cohort selection and definition

It needs to be clearer as to who and why was excluded before arriving at the study cohort. Were the 38 438 because the others were nullips? Or missing data?

Reply: 38438 pregnant women were extracted from 99977 women because they had two and more births whose gestational weeks are over 20, the others just gave birth once or failed to meet inclusion criteria.

The geographical area should also be defined better, with normal practice etc. See STROBE checklist.

Reply: The included area are Beijing, Hunan, Guangdong, Zhejiang, Henan, Heilongjiang, Shandong, Sichuan, Shanghai, Shanxi provinces.

Changes in the text: we added detailed area in the Resources part (see page 6 line 5-6).

It is not clear if they had all only had one prior birth. I think not, because of the PVD group 4% had a 'scarred' uterus. Or was this a myomectomy? This will influence the results.

On subsequent exclusions: 'history of...' this refers to the previous pregnancy?

How can the incidence of history of pre-eclampsia be 13/ 25747 in the PVD group? This is 0.05%!

Reply: The scared uterus shown here is a history of uterine surgery (including myomectomy and cesarean section). Unfortunately, we didn't divide them into

myomectomy, endometrial polypectomy and cesarean section which is a big shame

of it because the original data didn't be classified carefully.

Changes in the text: For the sake of seriousness, we added the explanation of the explanation of the scared uterus. (see page 9 line 15-16)

Missing data

This is not clearly defined in the cohort or with exclusions

Reply: The exclusion criteria are listed in the filtering chart below, not showing in the word part.

Changes in the text: We added the exclusion criteria part. (see page 7 line 1-3)

More 'basic information' (Table 1) would be useful (e.g., parity)

Reply: the pregnancy times means the parity times.

The incidence of pregnancy >41 weeks would be useful

Reply: I'm sorry that the original data didn't include the incidence of pregnancy ≥41 weeks.

Data on size for gestational age (rather than just size) would be useful. Induction of labour?

There must have been much of this because of the mean gestations.

Reply: We have previously considered specifying the gestational weeks, however the term delivery, preterm delivery <37 weeks and preterm delivery <34 weeks were more revealing, and there was no significant difference in pregnancy outcomes within each interval. I'm sorry that there were no statistics on induction methods.

Very limited neonatal data is presented. Death?

Reply: We actually tended to analyze the data of stillbirth and neonatal death. However, the original data were not complete.

No maternal data ex blood loss.

Reply: The postpartum hemorrhage means blood loss shown in the table 2.

What is placental implantation- they presumably don't mean placenta accreta spectrum because the incidence is too high? This data would be useful.

Reply: Placental implantation refers to insertion of the placenta into the myometrium on the top of placenta previa. The probable cause is the insertion of the placenta into the myometrium due to the inflammatory reaction around the scar, which means the cesarean section increased the incidence of placenta

implantation.

Analysis

The principal difficulty here is they are comparing women having their second section with women, for (at least nearly $\frac{3}{4}$ of them) are having their second vaginal birth. This is comparing apples and limes. Some adjustment for possible confounding variables is performed but 1) this is not described in the methods, 2) it is not clear what factors were used (the * in the Tables refers to nothing), and 3) most importantly they are missing data (or have not presented data) such as pre-eclampsia or IUGR which might dramatically alter their results.

In the Tables there are missing data. The CI are missing (I think from AORs).

Percentages are missing- and there is little need for both X2 and p values – as well as 95% CI.

Reply: Thank you for your suggestions, I think the advantage of this paper is the large

amount, however, this is also the weakness of it because the two groups can't be completely parallel. It's like comparing apple trees with lime trees.

Changes in the text:

- 1) We added the analyzed method in the statistical analysis part.**
- 2) aOR* is calculated considering multi-factors, like age, pregnant times, BMI, IVF-ET.**

We replaced aOR* with OR in the article.

- 3) We added the complications: Gestational hypertension disorders and gestational diabetes mellitus. We can see them in the Table 2.**
- 4) We added CI and percentage in the Table, and change the P number, delete the X2. Please check it out.**

All this means that the main findings are not clear.

We are left with in the area under study more women have a CS of they had a previous one, their risk of minor haemorrhage is similar and of larger haemorrhage is greater. And they are more likely to have placenta praevia. Little else can be gleaned and what is there is not new to the international literature.

As an awake up call to Chinese maternity practice, however, this is of some interest: but it needs more work and better data.

I have a suggestion.

The authors have a unique opportunity in that they have a large cohort of CS for maternal request i.e., ostensibly with no medical indication. Using this might indeed add to the international literature if the data collection is good enough. They could

compare these to 'planned vaginal birth' (not actual).

Reply: Thank you for your suggestions. As mentioned in the paper, the conclusions were not new for the cognition in Obstetrics. But with the continuous innovation of the obstetrics surgery techniques, prenatal examinations and postpartum care, we believe that the impact of the cesarean section history on women's second pregnancy will be gradually reduces, which is what we expect. Your idea gave me a lot of thoughts, which can be explored to investigate the different pregnancy outcomes between planned CS and those without medical indications.