

15 June, 2023

Editor-in-Chief
World Journal of Clinical Cases

Dear Editor:

Thank you for your email dated 13 June, 2023, which provided us with the opportunity to revise our manuscript. We enclose for submission to the *World Journal of Clinical Cases* a revised version of the paper titled “Predictive value of the trans-perineal three-dimensional ultrasound measurement of the pubic arch angle for vaginal delivery.” Below we have attached detailed responses to the comments about the revised manuscript, which has been revised to incorporate your comments.

Each comment is presented below, immediately followed by our response.

Comment 1: Acronyms must be identified the first time they are used.

Response: Thank you for pointing this out. We have followed your advice and defined the acronym SPAA the first time it is used in the abstract on Line 12, Page 1, in the newly submitted version. The sentence reads as follows:

“Numerous variables are linked to the success of vaginal delivery, including the subpubic arch angle (SPAA) during labor, the importance of which has not yet been fully elucidated.”

It has also been defined the first time it is used in the main body of the manuscript on Line 29, Page 2. The sentence reads as follows:

“However, some obstetricians have found that specific pelvic measurement indicators—including the subpubic arch angle (SPAA)—are crucial to labor outcomes.”

Comment 2: In the Introduction, there are linguistic and writing errors that should be corrected.

Response: We appreciate this comment, which helped us to improve our paper. We have followed your advice and revised the Introduction. In addition, we have used the language editing services of the *LetPub* to polish our revised manuscript. The revised passage reads as follows from Line 17, Page 2, to Line 18, Page 3:

“One of the key concerns of obstetricians and laboring mothers is predicting the results of labor. The discomfort experienced by pregnant women unable to give birth vaginally can be lessened by attenuating the effects of obstetricians’ differing degrees of experience with labor outcomes. Additionally, elective cesarean deliveries can be performed to end a pregnancy before labor begins, effectively lowering the rate of emergency cesarean deliveries.

Numerous variables—including a mother’s age, height, BMI, weight gain during pregnancy, newborn weight, and pelvic size—are linked to a vaginal delivery's success. Due to its ambiguity, pelvic measurement is currently relegated to a lesser position in several obstetric textbooks [1]. Some argue that pelvic measurement should be abandoned entirely. However, some obstetricians have found that specific pelvic measurement indicators—including the SPAA—are crucial to labor outcomes. A few studies have confirmed this observation [2-4]. An essential but underutilized signal in pelvic measurements is the SPAA, which serves as a gauge of the pelvic outlet’s anterior triangle’s size. Women with small SPAAs frequently have protracted or stalled labor that often requires forceps, fetal head extraction, or emergency cesarean section, which significantly increases the risk to both the mother and fetus.

Previous clinical and empirical studies have not fully elucidated the SPAA's importance in labor, possibly due to traditional measurement methods [5]. For example, obstetricians often use a protractor for manual measurement. Recently, new methods—including X-rays, CT, MRI, and ultrasonography—have been applied to measuring the SPAA. Ultrasonography's advantages in pelvic measurement are becoming increasingly evident. Ultrasound measurement of the SPAA before delivery has a relatively low technical requirement, but can accurately and objectively reflect the pelvic outlet without individual bias. While X-rays avoid fetal head obstruction and CT offers higher accuracy, both use radiation, which is unacceptable to most patients. MRI is radiation-free and accurate, but more expensive and less accessible.

Thus, this study aimed to explore 3D ultrasound measurement of the SPAA as a noninvasive, low-risk, highly accurate method to predict the delivery mode before labor and investigate the relationship between the SPAA, vaginal delivery, and labor duration.”

Comment 3: Some of the data in the summary are contradicted by what is reflected in the results.

Response: Thank you for pointing out this omission in our manuscript. We have followed your advice and rectified the mistakes and inconsistencies after rechecking the study's statistical computations, the data in the results section, and the data in the summary. The updated summary is as follows, and can be found from Line 26, Page 1, to Line 4, Page 2:

“Our analysis of 301 pregnant women revealed that the SPAA measured using 3D trans-perineal ultrasound had a minimum angle of 81° and a maximum angle of 122.2°. The angle in the normal vaginal delivery group was greater than that in the labor cesarean group (P=0.000). The SPAA was a highly significant positive predictor of normal vaginal delivery (P=0.000) with an area under the curve of 0.782(P=0.000; 95% CI, 0.717–0.848). We found the length of the second stage of labor to be positively influenced by the SPAA using linear regression analysis (P=0.045).”

Comment 4: The discussion is excessively long.

Response: We appreciate your suggestion for improving our paper. In the revision, we have reorganized the discussion per your suggestion. The revised version of the discussion was reduced from 1,643 words in the original version to 1,174 words. We hope that this meets your expectations.

Thank you again for your great efforts to help us improve the manuscript. These suggestions have helped us greatly in improving our work. We hope that we have addressed all of your concerns in the revision. We are looking forward to hearing from you soon.

Sincerely,

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