Evaluating Waterbirth Risks: A Deep Dive into the POOL Cohort Study's Research Gaps

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After a thorough analysis of the latest research by Julia Sanders et al. on severely obese adolescents, we are encouraged by the finding that waterbirth with the use of warm water immersion for analgesia in women without antenatal or intrapartum risk factors does not increase the incidence of obstetric anal sphincter injuries (OASI) or adverse neonatal outcomes compared to births that occur out of water[1]. However, we believe there are key potential issues that may affect the interpretation of the study results.

Firstly, the study did not explicitly adjust for the potential impact of twin or multiple pregnancies in its analysis. Although the study excluded women with antenatal or intrapartum risk factors, it did not specify whether twin or multiple pregnancies were considered. Twin or multiple pregnancies significantly increase the stress on the birth canal during delivery, especially on the anal sphincter, as they need to accommodate and deliver multiple fetuses. This increased pressure can lead to excessive stretching and tearing of the birth canal tissues, thereby affecting the risk of OASI[2]. Additionally, multiple pregnancies may prolong the labor process, especially the second stage, as multiple fetuses need to be delivered consecutively, further increasing the risk of trauma to the birth canal. Moreover, the significant expansion of the uterus and birth canal caused by multiple pregnancies could affect the integrity of the birth canal and the function of the anal sphincter. Concerning the postpartum hemorrhage, a particular focus of waterbirth studies, multiple pregnancies are more common than singleton pregnancies, which is related to an increased risk of uterine atony, a primary cause of obstetric hemorrhage. At the same time, multiple pregnancies lead to increased maternal blood volume and uterine blood flow to support the additional uterine, placental, and fetal tissues. The unique

factors of twin or multiple pregnancies, such as differing chorionicity and discordant fetal growth, could also significantly affect the reliability of the study's conclusions[3].

Secondly, the study did not record in detail the mode of onset of labor, the duration of labor, the duration of immersion in warm water, and the use of pharmacological analgesia, which are factors widely considered in previous waterbirth research[4]. Not recording whether labor started naturally or was induced could affect the assessment of the labor process and the need for interventions. Induced labor may increase the risk of OASI because it can involve more intense contractions and a shorter cervical dilation period. Also, not recording the duration of the three stages of labor and the details of pharmacological analgesia use may limit the assessment of labor progression, pain management, maternal comfort, and a more comprehensive outcome, which could also affect the labor process and the initial state of the newborn. In summary, although the study's conclusions by Julia Sanders et al. are somewhat encouraging, further analysis and resolution of the above issues will help to enhance the credibility and validity of the study's conclusions.

References

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