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Correspondence

Unusual maternal hemoglobin elevation before delivery as a rare presentation of massive fetomaternal hemorrhage

Dear Editor and Dr Cozzolino Mauro:

We are so happy to hear that you had some thought-provoking comments to our article, "Unusual maternal hemoglobin elevation before delivery as a rare presentation of massive fetomaternal hemorrhage" [1].

Bidirectional passage of minute number of cells across the placenta is a physiological event, although no universally accepted threshold defines the volume that constitutes a massive fetomaternal hemorrhage (FMH); volumes of 10–150 mL have been proposed [2].

Regarding the first question, computerized cardiotocography was not available in our hospital setting. Thank you for such a good suggestion and we will try to use computerized cardiotocography if we encounter a patient with suspected FMH in the future.

Regarding the second question you mentioned, we did have a level I ultrasound scan while the patient was admitted. The sonography findings were as follows. There was a singleton pregnancy, as vertex presentation. The biparietal diameter was 9.35 cm. The abdominal circumference was 32.5 cm. The femoral length was 6.61 cm. The estimated body weight was 3067 gm. The amniotic fluid index was 11.3 cm. The placenta was located at the anterior uterine wall. There was no gross anomaly found at the prenatal sonography exam. The middle cerebral artery (MCA) exam was not performed routinely at our hospital. Besides, while the fetal distress happened and decelerated to an undetectable level, we were in a hurry to prepare the emergent cesarean section. There was not enough time to check the MCA flow. According to the current report, the reduction of fetal movements can be considered as the first factor that has to suspect a possible diagnosis of FMH. [3] We also confess that FMH was not the initial clinical suspicion; therefore, the MCA flow was not checked at that critical circumstance.

Regarding the last question, we do agree with your expert advice that in women at term of pregnancy who report a reduction of fetal movements, we should consider computerized cardiotocography and an MCA evaluation. However, in our country, the delivery mostly always takes place at hospital, and the maternal hemoglobin was routinely checked as a part of several hospitals' protocols. The elevation of hemoglobin for a woman at term pregnancy in a short time period was not common. Erythrocytosis during pregnancy may be due to chronic hypoxia environment, cigarette smoking, polycythemia vera, or neoplasm [4,5]. The elevation of hemoglobin (from 14.0 g/dL to 15.3 g/dL) in 5 days cannot be easily explained by other etiology, and the Kleihauer–Betke test showed 159 fetal red blood cells in 2000 cells. The estimated fetal blood volume lost ranges from 397 mL to 1520 mL, using different formulas [6]. Therefore, we proposed that the unexplained elevation of maternal hemoglobin in a short period may be a minor clue to FMH.

We are sincerely thankful for these valuable suggestions, and we are glad to receive such comments from an expert. Thank you very much again.

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