Bleeding news

Evaluating the Association Between Fibrinogen and Rotational Thromboelastometry and the Progression to Severe Obstetric Hemorrhage

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Obstetric hemorrhage is still one of the main causes of maternal death, in spite of the breakthroughs over the last few years. One of the aspects where there is room for improvement is early diagnosis, on account of the difficulty it involves, given the complexity of the scenario, particularly in the group of patients developing a massive hemorrhage.

One of the parameters that have already been described in the literature is fibrinogen levels, with a positive predictive value of 100% in terms of progression to massive obstetric hemorrhage (MOH) when it falls below 200 mg/dl. At the same time, the value of ROTEM FIBTEM A5 can be used as a predictor of progression to MOH, but the value of the remaining parameters in the viscoelastic test remains unknown.

Following a retrospective study, the authors analyze the data in 155 patients with massive hemorrhage, of which 108 patients progressed to MOH, defined as a drop of 4 points or more of hemoglobin, or the transfusion of at least 4 packed red blood cells. According to a univariate analysis (due to a lack of sample), the cutoff points with a significant difference between both groups, measured at the start of the bleeding, were 289 mg/dl for fibrinogen, 62 s for CFT (clot formation time), 19 mm for FIBTEM A10, 17 mm for FIBTEM A20, 72^{o} for the alpha angle, 57 mm for EXTEM A10, and 65 mm for EXTEM A20.

Having parameters of the viscoelastic test as predictors of a progression to MOH may bring about an earlier response, and therefore, more efficient. It must be noted that the ROTEM parameters described are within a normal range for a pregnant patient. Thus, further studies would be required to help building new risk prediction models including both laboratory and clinical parameters of an optimal management of obstetric hemorrhage.