

LETTER TO THE EDITOR

Laboratory Adjusted Maternal PCR Cycle Threshold Cutoff Value for COVID-19

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SARS CoV2 infection or COVID-19 is still an important public health problem. COVID-19 can affect any groups of patients. The infection in pregnant women is an important clinical consideration [1]. For diagnosis of COVID-19, molecular diagnosis is still the gold standard in laboratory medicine. Based on RT-PCR test, an important clinical parameter is cycle threshold (Ct) value. A low Ct indicates a high viral load and might be associated with severity.

In general, Ct cutoff values of most RT-PCR tests are between 35 - 40 cycles. However, the cutoff value might be necessary adjusted in some specific cases. For pregnant women, there are many physiological changes. Expansion of volume occurs and it is necessary to adjust for laboratory parameters for specific use in pregnant women. According to the literature, there are few reports on Ct cutoff values for pregnant women [2,3]. Here, the authors reappraised and adjusted Ct cutoff value for COVID-19 based on available laboratory data from 403 pregnant women confirmed for COVID-19 by RT-PCR test. A receiver operating characteristic (ROC) curve technique proposed by Tanakan et al. [3] was used for determining Ct values in predicting obstetric complications. Based on the present analysis, the derived adjusted Ct cutoff value is equal to 24.3. Due to volume expansion during pregnancy, a lower cutoff value might be expected. Lower viral copies per unit volume in pregnant subjects with expanded volume can reflect a comparable overall number of viruses in body to

higher viral copies per unit volume in pregnant subject who have normal volume.

Declaration of Interest:

None.

References:

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