LETTER TO THE EDITOR

Prediction of moderately severe and severe acute pancreatitis in pregnancy: Several issues

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Abstract

We reviewed a study addressing the development and validation of a prediction model for moderately severe and severe acute pancreatitis in pregnancy. We identified some statistical deficiencies in this article. In addition, we believe that the role of cholesterol as a predictor should be described in more detail.

Key Words: Acute pancreatitis; Prediction model; Statistical analyses; Cholesterol

Core Tip: This is a comment on a study involving the development and validation of a prediction model for moderately severe and severe acute pancreatitis in pregnancy. We believe that the role of cholesterol as a predictor should be more clearly described.

TO THE EDITOR

We were pleased to read the high-level article published by Yang *et al*[1]. In this article, the authors developed and validated a nomogram with good accordance for the prediction of moderately severe and severe acute pancreatitis in pregnancy (MSIP). The authors reported a nomogram that incorporated numerous blood indices for albumin, lactate dehydrogenase, triglyceride, and cholesterol levels, thus facilitating the early individualized prediction of the severity of acute pancreatitis in pregnancy

(APIP). This study is of great significance for the clinical management of APIP. However, in our opinion, this article has some problems that need to be discussed further.

First, we found that some data that were not suitable for this article. In the result sections, we noticed that 134 patients were classified as having mild acute pancreatitis in pregnancy (MAIP) and 56 as having MSIP. However, Figure 1 (https://www.wjgnet.com/1007-9327/full/v28/i15/WJG-28-1588-g001.htm) and Table 1 (https://www.wjgnet.com/1007-9327/full/v28/i15/1588-T1.htm) showed that the number of patients with MAIP and MSIP was 136 and 54, respectively. This inconsistency should be addressed.

In addition, there are problems associated with the statistical analyses in that the methods used for statistical analyses should be described in more detail. In Table 1 (https://www.wjgnet.com/1007-9327/full/v28/i15/1588-T1.htm) and Table 2 (https://www.wjgnet.com/1007-9327/full/v28/i15/1588-T2.htm), the authors should provide more accurate statistical values, including Student's *t*-values or χ^2 values, instead of just providing *P* values. Most of the variables mentioned by the authors in Table 1 (https://www.wjgnet.com/1007-9327/full/v28/i15/1588-T1.htm) and Table 2 (https://www.wjgnet.com/1007-9327/full/v28/i15/1588-T2.htm), such as cholesterol and platelets, are not labeled with units of measurement. Moreover, *P*-values were not listed in the statistical results for "trimester of pregnancy on admission".

In the Discussion section, the authors mentioned that hypercholesterolemia is a known risk factor for cardiovascular diseases. In fact, high-density lipoprotein (HDL) and non-HDL cholesterol have opposite associations with cardiovascular diseases[2], and plasma HDL cholesterol concentrations correlate negatively with the risk of cardiovascular diseases[3]. The authors mentioned that cholesterol is a predictive factor for MSIP, and the cholesterol levels of patients with MAIP and MSIP were 7.34 ± 5.63 and 12.80 ± 6.64, respectively, in Table 1 (https://www.wjgnet.com/1007-9327/full/v28/i15/1588-T1.htm). The authors mentioned some previous studies in their Discussion section. We took a close look at these studies and found that only one recent study[4] showed that low levels of total cholesterol (TC) and high TC within 24 h of admission were independently associated with an increased risk of severe acute pancreatitis. Other studies[5-7] have suggested that serum levels of HDL cholesterol are inversely correlated with disease severity in patients with predicted severe acute pancreatitis. However, this study showed that cholesterol is a predictive factor for MSIP but not HDL. This is a confusing statement. We believe that the present study is inconsistent with previous studies and that the role of cholesterol as a predictor should be more clearly described.

FOOTNOTES

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