

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

Qun-Ying Yang, Jian-Wen Hu

Specialty type: Gastroenterology and hepatology

Provenance and peer review: Unsolicited article; Externally peer reviewed.

Peer-review model: Single blind

Peer-review report's scientific quality classification

Grade A (Excellent): 0
Grade B (Very good): B
Grade C (Good): C
Grade D (Fair): 0
Grade E (Poor): 0

P-Reviewer: Juneja D, India; Shalaby MN, Egypt

Received: May 1, 2022

Peer-review started: May 1, 2022

First decision: June 19, 2022

Revised: June 22, 2022

Accepted: August 16, 2022

Article in press: August 16, 2022

Published online: September 7, 2022



Qun-Ying Yang, Jian-Wen Hu, Department of Gastroenterology, Dongyang People's Hospital, Dongyang 322100, Zhejiang Province, China

Corresponding author: Jian-Wen Hu, PhD, Professor, Department of Gastroenterology, Dongyang People's Hospital, No. 60 Wuning West Road, Dongyang 322100, Zhejiang Province, China. 18367908196@163.com

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

©The Author(s) 2022. Published by Baishideng Publishing Group Inc. All rights reserved.

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.

Citation: Yang QY, Hu JW. Prediction of moderately severe and severe acute pancreatitis in pregnancy: Several issues. *World J Gastroenterol* 2022; 28(33): 4926-4928

URL: <https://www.wjgnet.com/1007-9327/full/v28/i33/4926.htm>

DOI: <https://dx.doi.org/10.3748/wjg.v28.i33.4926>

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

Author contributions: Yang QY reviewed the literature and contributed to manuscript drafting; Hu JW was responsible for the revision of the manuscript for important intellectual content; all authors issued final approval for the version to be submitted.

Conflict-of-interest statement: All the authors report no relevant conflicts of interest for this article.

Open-Access: This article is an open-access article that was selected by an in-house editor and fully peer-reviewed by external reviewers. It is distributed in accordance with the Creative Commons Attribution NonCommercial (CC BY-NC 4.0) license, which permits others to distribute, remix, adapt, build upon this work non-commercially, and license their derivative works on different terms, provided the original work is properly cited and the use is non-commercial. See: <https://creativecommons.org/licenses/by-nc/4.0/>

Country/Territory of origin: China

ORCID number: Qun-Ying Yang 0000-0002-4196-440X; Jian-Wen Hu 0000-0002-6452-8790.

S-Editor: Fan JR

L-Editor: Wang TQ

P-Editor: Fan JR

REFERENCES

- 1 **Yang DJ**, Lu HM, Liu Y, Li M, Hu WM, Zhou ZG. Development and validation of a prediction model for moderately severe and severe acute pancreatitis in pregnancy. *World J Gastroenterol* 2022; **28**: 1588-1600 [PMID: 35582133 DOI: 10.3748/wjg.v28.i15.1588]
- 2 **NCD Risk Factor Collaboration (NCD-RisC)**. National trends in total cholesterol obscure heterogeneous changes in HDL and non-HDL cholesterol and total-to-HDL cholesterol ratio: a pooled analysis of 458 population-based studies in Asian and Western countries. *Int J Epidemiol* 2020; **49**: 173-192 [PMID: 31321439 DOI: 10.1093/ije/dyz099]
- 3 **Pownall HJ**, Rosales C, Gillard BK, Gotto AM Jr. High-density lipoproteins, reverse cholesterol transport and atherogenesis. *Nat Rev Cardiol* 2021; **18**: 712-723 [PMID: 33833449 DOI: 10.1038/s41569-021-00538-z]

- 4 **Hong W**, Zimmer V, Basharat Z, Zippi M, Stock S, Geng W, Bao X, Dong J, Pan J, Zhou M. Association of total cholesterol with severe acute pancreatitis: A U-shaped relationship. *Clin Nutr* 2020; **39**: 250-257 [PMID: [30772093](#) DOI: [10.1016/j.clnu.2019.01.022](#)]
- 5 **Peng YS**, Chen YC, Tian YC, Yang CW, Lien JM, Fang JT, Wu CS, Hung CF, Hwang TL, Tsai YH, Lee MS, Tsai MH. Serum levels of apolipoprotein A-I and high-density lipoprotein can predict organ failure in acute pancreatitis. *Crit Care* 2015; **19**: 88 [PMID: [25851781](#) DOI: [10.1186/s13054-015-0832-x](#)]
- 6 **Khan J**, Nordback I, Sand J. Serum lipid levels are associated with the severity of acute pancreatitis. *Digestion* 2013; **87**: 223-228 [PMID: [23751273](#) DOI: [10.1159/000348438](#)]
- 7 **Hong W**, Lin S, Zippi M, Geng W, Stock S, Zimmer V, Xu C, Zhou M. High-Density Lipoprotein Cholesterol, Blood Urea Nitrogen, and Serum Creatinine Can Predict Severe Acute Pancreatitis. *Biomed Res Int* 2017; **2017**: 1648385 [PMID: [28904946](#) DOI: [10.1155/2017/1648385](#)]



Published by **Baishideng Publishing Group Inc**
7041 Koll Center Parkway, Suite 160, Pleasanton, CA 94566, USA
Telephone: +1-925-3991568
E-mail: bpgoffice@wjgnet.com
Help Desk: <https://www.f6publishing.com/helpdesk>
<https://www.wjgnet.com>

