ISSN 2218-6182 (online)

World Journal of *Anesthesiology*

World J Anesthesiol 2020 September 27; 9(1): 1-11

Published by Baishideng Publishing Group Inc

World Journal of Anesthesiology

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World Journal of Anesthesiology

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ABOUT COVER

Editorial board member of *World Journal of Anesthesiology*, Dr. Amr Salah Omar, MBBch, Msc, PhD, MD, MBA, is Professor at Beni Suef University (Egypt). After completing his PhD in Critical Care Medicine from Cairo University in 2003, he undertook further graduate study at University of Liverpool (United Kingdom), being awarded an MBA in 2014. In 2016, he was granted the position of Assistant Professor at Weill Cornell Medicine-Qatar, which led to his current position as Senior Consultant Intensivist in the Cardiothoracic Surgery Department of Hamad Medical Corporation (HMC; Qatar). His career research efforts in hemodynamic monitoring, mechanical circulatory support and glycemic control have yielded over 40 peer-reviewed publications and been presented at more than 30 international conferences. Dr. Omar has received three innovation grants from HMC and the Qatar Science and Technology Park (member of the Qatar Foundation) over the last 4 years. (L-Editor: Filipodia)

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The *WJA* is now indexed in China National Knowledge Infrastructure (CNKI), China Science and Technology Journal Database (CSTJ), and Superstar Journals Database.

RESPONSIBLE EDITORS FOR THIS ISSUE

NAME OF JOURNAL
World Journal of Anesthesiology

ISSN
ISSN 2218-6182 (online)

LAUNCH DATE
December 27, 2011

FREQUENCY
Irregular

EDITORS-IN-CHIEF
Luis Tollinche

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https://www.wjgnet.com/2218-6182/editorialboard.htm

PUBLICATION DATE
September 27, 2020

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World J Anesthesiol 2020 September 27; 9(1): 1-2

DOI: 10.5313/wja.v9.i1.1

ISSN 2218-6182 (online)

EDITORIAL

Low dose corticosteroids in COVID-19 with refractory shock: We are not sure?

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Author contributions: Omar AS solely contributed to this manuscript.

Conflict-of-interest statement: The author has no conflicts of interest to declare.

Manuscript source: Unsolicited manuscript

Received: May 27, 2020
Peer-review started: May 27, 2020
First decision: July 21, 2020
Revised: July 22, 2020
Accepted: August 15, 2020
Article in press: August 15, 2020
Published online: September 27,

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Abstract

Low dose corticosteroids to adult patients with coronavirus disease 2019 (COVID-19) and refractory shock was given some evidence, the evidence was of low quality given particularly for shock-reversal. Evidence. However bacterial sepsis may not provide a similar evidence like in a viral related one. We think that suggesting steroids for COVID-19 may not be adequate in the current time and future data analysis should be directed to find possible evidence in a matched population

Key Words: Corticosteroids; Sepsis; Shock; COVID-19; Refractory; Outcome

Core Tip: We think that suggesting steroids for coronavirus disease 2019 may not be adequate in the current time and future data analysis should be directed to find possible evidence in a matched population.

Citation: Omar AS. Low dose corticosteroids in COVID-19 with refractory shock: We are not sure? *World J Anesthesiol* 2020; 9(1): 1-2
URL: https://www.wjgnet.com/2218-6182/full/v9/i1/1.htm
DOI: https://dx.doi.org/10.5313/wja.v9.i1.1

2020

P-Reviewer: Kasztelan-Szczerbinska B, Wang X
S-Editor: Ma YJ
L-Editor: A
P-Editor: Li JH

INTRODUCTION

With great interest we followed the recent guidelines for managing critically ill adult patients with coronavirus disease 2019 (COVID-19) that was released from the Surviving Sepsis Campaign. The writing group gave a weak recommendation for giving low dose corticosteroids to adult patients with COVID-19 and refractory shock, the evidence was of low quality given particularly for shock-reversal[1]. The utility of low dose corticosteroids plus fludrocortisone therapy were presented in a study by Annane *et al*[2], the authors found a lower 90-days all-cause mortality in the corticosteroids treated group when compared with placebo confirming adrenocortical insufficiency in these patients.

We argue that the given evidence in bacterial sepsis may not provide a similar one in a viral related one. Delayed viral redemption, diabetes, psychosis, and avascular necrosis could exist, plus absence of survival benefit which was found in a systemic review analyzed observational studies of corticosteroids in patients with severe acute respiratory syndrome related to viral invasion[3]. In a recent study by Arabi *et al*[4], done on 309 patients infected with middle east respiratory syndrome (MERS), the authors did not find a mortality advantage in the corticosteroid treated population after utilizing an adjusted time varying statistical approach for confounders. Moreover, they observed delayed clearance of MERS coronavirus RNA.

In many cases of viral invasion, the reason for shock remains unclear, however it could be due to viral myocarditis or stress cardiomyopathy where corticosteroids could be of no value or adding additional harm to this dilemma[5]. In Annane[2]'s trial, adequacy of the starting antimicrobial regimen was judged first according to insulting pathogen sensitivity and the site of infection in 96.2% and 96.9% of the patients who received antimicrobials either placebo or corticosteroids respectively. The later coverage does not exist till now for COVID-19.

CONCLUSION

We think that the indirect evidence used for suggesting steroids for COVID-19 may not be adequate in the current time and future data analysis should be directed to find possible evidence in a matched population.

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