Predictors in major burn patients

Na-Rong Lee[a,b], Wen-Hsun Chang[a,b], Peng-Hui Wang[a,c,d,e,*]

[a]Department of Obstetrics and Gynecology, Taipei Veterans General Hospital, Taipei, Taiwan, ROC; [b]Department of Nursing, Taipei Veterans General Hospital, Taipei, Taiwan, ROC; [c]Department of Obstetrics and Gynecology, National Yang-Ming University, Taipei, Taiwan, ROC; [d]Institute of Clinical Medicine, National Yang-Ming University, Taipei, Taiwan, ROC; [e]Department of Medical Research, China Medical University Hospital, Taichung, Taiwan, ROC

DEAR EDITOR,

We read the Chen and colleagues' article published in the recent issue of the *Journal of the Chinese Medical Association* with interest. The author tried to evaluate the value of albumin supplementation on major burn patients.[1] The author found the administration of a large amount of albumin supplementation for correction of prolonged hypoalbuminemia in major burn patients might not decrease the mortality rate significantly.[1] Since burns are the fourth most common type of trauma, contributing to biggest psychosomatic and economic burden, any therapeutic strategy will be welcome.[2–5] We congratulate the success of the authors' publication, but we have some confusions about the current publication and hope to see the answers provided by authors.

At first, the authors claimed that ratio of C-reactive protein and albumin (CRP/Alb) might be valuable in the prediction of the mortality in major burn patients.[1] However, the authors failed to clearly demonstrate "the time" of the data. Were the data obtained in the initial time (day 0, the resuscitation phase) or in the post-resuscitation phase (day 7) of the major burn patients? If the data were obtained from the initial status of these patients, it is reasonable to support the finding by authors: a large amount of albumin supplementation might not improve the outcome of major burn patients, because a large amount of albumin supplementation might significantly lower the ratio of CRP and albumin (CRP/Alb).

Second, since the authors used the "receiver operating characteristic" curve of CRP/Alb in the prediction of the mortality of major burn patients, could the authors use the same strategy to propose the cut-off value of serum albumin or serum CRP value even in the initial state or post-resuscitation state of these major burn patients?

Third, it is interesting to know what is the difference between day 7 and week 1 which has been shown in Table 3 of Ref. 1.

Lastly, it is interesting to find the value of CRP in the initial time seemed to be relatively low (mean 3.56, 3.44, 1.71, or 1.12 mg/dL) but relatively higher in the post-resuscitation phase (mean 18.65 or 12.61 mg/dL). By contrast, serum level of albumin seemed to be relatively similar in patients regardless of a large amount of albumin supplementation was given or not. Are they useful in the prediction of the mortality in these major burn patients?

The above-mentioned questions do not criticize the scientific value of the authors' contribution, and we are looking forward to learning the authors' kind response.

ACKNOWLEDGMENTS

This article was supported by grants from the Ministry of Science and Technology, Executive Yuan, Taiwan (MOST 106-2314-B-075-061-MY3), and Taipei Veterans General Hospital (V109A-022 and VGH109C-108). The authors appreciate the financial support of the Female Cancer Foundation, Taipei, Taiwan.

REFERENCES

1. Chen YF, Ma H, Perng CK, Liao WC, Shih YC, Lin CH, et al. Albumin supplementation may have limited effects on prolonged hypoalbuminemia in major burn patients: an outcome and prognostic factor analysis. *J Chin Med Assoc* 2020;**83**:206–10.
2. Chen GY, Chang CP, Wang PH. Burn wound and therapeutic challenge. *J Chin Med Assoc* 2019;**82**:748–9.
3. Feng CJ, Lin CH, Tsai CH, Yang IC, Ma H. Adipose-derived stem cells-induced burn wound healing and regeneration of skin appendages in a novel skin island rat model. *J Chin Med Assoc* 2019;**82**:635–42.
4. Li YT, Lee FK, Wang PH. Mesenchymal stem cells derived-magic bullets for burns. *J Chin Med Assoc* 2020;**83**:215–6.
5. Liu JS, Du J, Cheng X, Zhang XZ, Li Y, Chen XL. Exosomal mir-451 from human umbilical cord mesenchymal stem cells attenuates burn-induced acute lung injury. *J Chin Med Assoc* 2019;**82**:895–901.

**Address Correspondence. Dr. Peng-Hui Wang, Department of Obstetrics and Gynecology, Taipei Veterans General Hospital, 201, Section 2, Shi-Pai Road, Taipei 112, Taiwan, ROC. E-mail address: phwang@vghtpe.gov.tw (P.-H. Wang).*

Conflicts of interest: The authors declare that they have no conflicts of interest related to the subject matter or materials discussed in this article.

Journal of Chinese Medical Association. (2020) 83: 584.

Received January 23, 2020; accepted January 23, 2020.

doi: 10.1097/JCMA.0000000000000268.