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CORRECTION

Correction: Efficacy observation of erythropoietin on sepsis complicated with acute respiratory distress syndrome

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In the originally published article (DOI: 10.22514/sv.2024.046) [1], post-publication review by the Editorial Office identified that several references did not appropriately or sufficiently support the corresponding statements in the text, and that the clinical trial registration information was incomplete (the study was not prospectively registered in a public trial registry prior to patient enrollment, which is required by ICMJE guidelines and the journal's policy).

In collaboration with the authors, the following corrections have been made in this Correction:

1. The following references have been replaced with more appropriate citations in this Correction:

[5] replaced by: Peng B, Kong G, Yang C, Ming Y. Erythropoietin and its derivatives: from tissue protection to immune regulation. Cell Death & Disease. 2020; 11: 79.

[8] replaced by: Silverberg DS, Wexler D, Blum M, Keren G, Sheps D, Leibovitch E, *et al*. The use of subcutaneous erythropoietin and intravenous iron for the treatment of the anemia of severe, resistant congestive heart failure improves cardiac and renal function and functional cardiac class, and markedly reduces hospitalizations. Journal of the American College of Cardiology. 2000; 35: 1737–1744.

[9] replaced by: Jia L, Zhao W, Yang JH, Xue X, Tang WJ. Protective effect of erythropoietin on the lung of rats after cardiopulmonary resuscitation. Journal of Bengbu Medical University. 2018; 43: 284–287. (In Chinese)

[12] replaced by: Bellani G, Laffey JG, Pham T, Fan E, Brochard L, Esteban A, *et al.*; LUNG SAFE Investigators; ESICM Trials Group. Epidemiology, patterns of care, and mortality for patients with acute respiratory distress syndrome in intensive care units in 50 countries. JAMA. 2016; 315: 788–800. Erratum in: JAMA. 2016; 316: 350.

[13] replaced by: Sadana D, Kaur S, Sankaramangalam K, Saini I, Banerjee K, Siuba M, *et al*. Mortality associated with acute respiratory distress syndrome, 2009–2019: a systematic review and meta-analysis. Critical Care and Resuscitation. 2023; 24: 341–351.

[15] replaced by: Liu L, Wu L, Chen Y, Deng R, Hu Y, Tu Y, *et al*. Clinical management of sepsis-associated acute respiratory distress syndrome: current evidence and future directions. Frontiers in Medicine. 2025; 12: 1531275.

[22] replaced by: Levi M, van der Poll T. Coagulation and sepsis. Thrombosis Research. 2017; 149: 38–44.

[23] replaced by: Leligdowicz A, Harhay MO, Calfee CS. Immune modulation in sepsis, ARDS, and Covid-19—the road traveled and the road ahead. NEJM Evidence. 2022; 1: EVIDra2200118.

[24] replaced by: Shang Y, Li X, Prasad PV, Xu S, Yao S, Liu D, *et al*. Erythropoietin attenuates lung injury in lipopolysaccharide treated rats. Journal of Surgical Research. 2009; 155: 104–110.

[25] replaced by: Rocha J, Eduardo-Figueira M, Barateiro A, Fernandes A, Brites D, Pinto R, *et al*. Erythropoietin reduces acute lung injury and multiple organ failure/dysfunction associated to a scald-burn inflammatory injury in the rat. Inflammation. 2015; 38: 312–326.

2. The following sentences in the Introduction and Discussion sections have been corrected for accuracy in this Correction:

In the Introduction section:

Original text: "Clinically, EPO is extensively used for treating renal anemia and has been shown to enhance cardiac function in heart failure patients [6–8]. Notably, EPO has demonstrated protective effects on lung tissue post-cardiopulmonary resuscitation [9]."

Corrected text: "Clinically, EPO is extensively used for treating renal anemia and has also been reported to improve cardiac and functional status in anemic patients with chronic

heart failure [6–8]. Notably, experimental studies have suggested that EPO may exert protective effects in acute lung injury, including sepsis-associated lung injury [9]."

In the Discussion section:

• Original text: "ARDS is a common critical illness in the intensive care unit (ICU). Available data suggest that over 10% of ICU admissions are due to ARDS, with a mortality rate ranging between 30% and 50% [12, 13]. Survivors often endure irreversible cerebral damage, leading to cognitive impairment, diminished lung capacity, and reduced exercise tolerance, significantly impacting their quality of life [14]. The association between sepsis and the progression of ARDS, particularly in critically ill patients, has been well-documented. The incidence of ARDS secondary to sepsis is higher, with mortality rates potentially reaching 70% to 90%, substantially exceeding those associated with non-septic ARDS [15]."

Corrected text: "ARDS is a common critical illness in the intensive care unit (ICU). Large international data suggest that ARDS accounts for approximately 10% of ICU admissions, and mortality remains high, increasing with syndrome severity [12,13]. Survivors often experience persistent cognitive and physical impairment, reduced exercise tolerance, and diminished quality of life [14]. Sepsis is a leading cause of ARDS and is associated with poor outcomes in critically ill patients [15]."

• Original text: "Thus, the administration of active anti-inflammatory and anticoagulant therapies is beneficial in the management of ARDS triggered by sepsis [22, 23]. Our study results demonstrated that the levels of TNF-α, IL-10 and CRP were significantly lower in the EPO group compared to the placebo group at both the 7th and 14th days of treatment, indicating that EPO effectively enhances the anti-inflammatory response, thereby diminishing neutrophil infiltration and the subsequent inflammatory injury caused by adhesion. These findings align with prior research indicating that EPO can reduce neutrophil infiltration into lung tissue [24, 25]."

Corrected text: "Given the close interplay between inflammation and coagulation in sepsis-associated ARDS, anti-inflammatory and anticoagulant strategies have been investigated as potential adjunctive approaches [22, 23]. Our study results demonstrated that the levels of TNF-α, IL-10 and CRP were significantly lower in the EPO group than in the placebo group on days 7 and 14, suggesting that EPO may attenuate the systemic inflammatory response in patients with sepsis-associated ARDS. These findings are broadly consistent with previous experimental studies showing that EPO can alleviate pulmonary inflammation and lung injury, with reductions in inflammatory mediators reported in lipopolysaccharide-induced models and reduced neutrophil chemotaxis/infiltration observed in some animal studies [24, 25]."

3. To ensure transparency and correct the academic record, the authors have now completed retrospective registration of the trial.

Trial Registry: ISRCTN.

Registration Number: ISRCTN14700344.

Date of Retrospective Registration: 15 April 2026.

The authors confirm that these corrections do not affect the scientific content, results, data interpretation, or conclusions of the original study.

The authors sincerely apologize for these inaccuracies and any inconvenience caused. This Correction has been approved by the Editor-in-Chief. The original article PDF remains available as published and has not been altered. Readers are advised to refer to this Correction for the updated references and the corrected sentences in the Introduction and Discussion sections, as well as the clinical trial registration information.

REFERENCES

[1] Jia L, Xue X, Zhang WX, Cai JQ, Yang JH, Zhao W. Efficacy observation of erythropoietin on sepsis complicated with acute respiratory distress syndrome. Signa Vitae. 2024; 20: 99–105.