[2] Lichtenstein D, Saïfi R, Augarde R, Prin S, Schmitt JM, Page B, et al. The internal jugular veins are asymmetric. Usefulness of ultrasound before catheterization. Intensive Care Med 2001;27(1):301–5.
[3] Czyzewska D, Ustymowicz A, Kosel J. Internal jugular veins must be measured before catheterization. J Clin Anesth 2015;27(2):129–31.
[4] Qian K, Ando T, Nakamura K, Liao H, Kobayashi E, Yahagi N, et al. Ultrasound imaging method for internal jugular vein measurement and estimation of circulating blood volume. Int J Comput Assist Radiol Surg 2014;9(2):231–9.
[5] Mey U, Glasmacher A, Hahn C, Gorschlüter M, Ziske C, Mergelsberg M, et al. Evaluation of an ultrasound-guided technique for central venous access via the internal jugular vein in 493 patients. Support Care Cancer 2003;11(3):148–55.
[6] Fortune JB, Feustel P. Effect of patient position on size and location of the subclavian vein for percutaneous puncture. Arch Surg 2003;138(9):996–1000.
[7] Kim JT, Kim HS, Lim YJ, Bahk JH, Lee KH, Kim CS, et al. The influence of passive leg elevation on the cross-sectional area of the internal jugular vein and the subclavian vein in awake adults. Anaesth Intensive Care 2008;36(1):65–8.
[8] Monnet X, Teboul JL. Passive leg raising. Intensive Care Med 2008;34(4):659–63.
[9] Monnet X, Rienzo M, Osman D, Anguel N, Richard C, Pinsky MR, et al. Passive leg raising predicts fluid responsiveness in the critically ill. Crit Care Med 2006;34(5):1402–7.
[10] Samy Modeliar S, Sevestre MA, de Cagny B, Slama M. Ultrasound evaluation of central veins in the intensive care unit: effects of dynamic manoeuvres. Intensive Care Med 2008;34(2):333–8.
[11] Burghold CM, Hohenstein C, Rueddel H. Trendelenburg position in the ED: many critically ill patients in the emergency department do not tolerate the Trendelenburg position. Eur J Emerg Med 2018. https://doi.org/10.1097/MEJ.0000000000000525.
[12] Bellazzini MA, Rankin PM, Gangnon RE, Bjoernsen LP. Ultrasound validation of maneuvers to increase internal jugular vein cross-sectional area and decrease compressibility. Am J Emerg Med 2009;27(4):454–9.
[13] Verghese ST, Nath A, Zenger D, Patel RI, Kaplan RF, Patel KM. The effects of the simulated Valsalva maneuver, liver compression, and/or Trendelenburg position on the cross-sectional area of the internal jugular vein in infants and young children. Anesth Analg 2002;94(2):250–4.
[14] Lobato EB, Sulek CA, Moody RL, Morey TE. Cross-sectional area of the right and left internal jugular veins. J Cardiothorac Vasc Anesth 1999;13(2):136–8.

1-hour bundle, an updated version of 3-hour bundle

To the Editor:

We read the interesting article by Shah et al. [1], who found that a sepsis screening tool implemented in an academic emergency department (ED) could increase the proportion of patients receiving timely antimicrobial therapy and demonstrated a trend towards decreased mortality. Though the study sounds scientific, we still have some concerns and different views after reading the article.

To begin with, Shah et al. claimed they designed the study for the sake of evaluating the sepsis screening tool implemented in their ED to determine its impact on the patients with sepsis. However, according to the flow chart of the study [1], only patients with severe sepsis and septic shock were included, those patients with sepsis were excluded, did the sepsis screening tool identify those patients with severe sepsis and septic shock more effectively than with sepsis or they just aim to target those patients with severe sepsis and septic shock? If so, it would be better to rephrase that their targeted population were patients with severe sepsis and septic shock rather than patients with sepsis in the title and context of the article and give reasons for doing so.

Besides, Shah et al. aimed to assess the efficacy of an ED sepsis screening tool, nevertheless, as a screening tool, the sensitivity, specificity, positive/negative predictive value, positive/negative likelihood ratio, the best cut-off, and receiver operating characteristic curve are fundamental for evaluating the accuracy, reliability and practicability of the screening tool. Therefore, we suggest the authors had better provide the readers with these characters of their screening tool.

Furthermore, the 3-hour bundle of 2012 version of Surviving Sepsis Campaign International Guideline was comprised of 4 vital elements — lactate measurement, obtaining blood cultures before administration of antibiotics, broad spectrum antibiotics administration, and application of 30 mL/kg crystalloid for hypotension or lactate ≧ 4 mmol/L [2]. According to Table 2 in the commented paper, after the screening tool had been modified and implemented, the compliance of the former three elements had been varied from 80.7% to 100%, while the compliance of the last one was just 41.9%, suggesting the main bottleneck of 3-hour bundle was adequate fluid resuscitation. In 2018, an updated version of bundles – 1-hour bundle – had been put forward by the task force of Surviving Sepsis Campaign as the result of new accumulated evidence. As per the new bundle [3], lactate measurement was still recommended and should be remeasured when the initial lactate value is >2 mmol/L and the other 3 vital elements were retained, in addition, a new element of applying vasopressors if patient is hypotensive during or after fluid resuscitation to maintain mean arterial pressure (MAP) ≧ 65 mm Hg was added to the old 3-hour bundle to form the new 5-element bundle, and the new bundle required all the 5 elements should be accomplished within 1 h due to sepsis was a medical emergency. Thus the future studies are required to evaluate the implementation of screening tools in EDs not only based on the new sepsis-3 definitions but also the new bundle of 1-hour bundle.

Abbreviations

ED	emergency department
MAP	mean arterial pressure

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References

[1] Shah T, Sterk E, Rech MA. Emergency department sepsis screening tool decreases time to antibiotics in patients with sepsis. Am J Emerg Med 2018;36(10):1745–8.
[2] Dellinger RP, Levy MM, Rhodes A, et al. Surviving sepsis campaign: international guidelines for management of severe sepsis and septic shock, 2012. Intensive Care Med 2013;39:165–228. https://doi.org/10.1007/s00134-012-2769-8 PMID: 23361625.
[3] Levy MM, Evans LE, Rhodes A. The surviving sepsis campaign bundle: 2018 update. Crit Care Med 2018;46(6):997–1000. https://doi.org/10.1097/CCM.0000000000003119 PMID: 29767636.