Correspondence

Comment on: Unusual mechanical complications of central venous catheterization

To the Editor

I have a comment on the research by Katrancioglu. I am extremely grateful for the detailed study in Sivas, Turkey. The author investigated and classified the complication of central venous catheterization on site of insertion. I recommend additional point about this study especially internal jugular vein as followings:

First, the internal jugular vein varies depending on either side. Qin et al² studied the diameter and distance from skin in internal jugular vein, Chinese population.² They drew a conclusion that right and left jugular veins have different anatomic condition.

Second, the success rate of central catheterization is different on senior and junior clinician. Ergil et al³ made a comparative study by senior and junior anesthetists in Turkey population. Senior group showed higher success rates than junior group in both jugular veins.

Third, real-time ultrasound-guided technique is superior to the landmark technique. Average access time and number of attempts were significantly reduced in ultrasound-guided group, Greek population.⁴

Yong Han Kim

Department of Anesthesiology and Pain Medicine Haeundae Paik Hospital, Inje University Busan, South Korea

Reply from the Author

I read the letter of Kim on my manuscript with great interest. He has some comment about additional point. I generally agree with Kim's comments. However, he emphasized Qin et al² study concluded that right and left jugular veins have different anatomic condition but my research was based on mechanical complication of central venous catheterization (CVC) and I did not collect data on diameter or distance from skin in the

internal jugular vein in the study population. Therefore, I could not speculate about this issue.

On the other hand, he emphasized Ergil et al³ study suggested that senior clinicians showed higher success rates than junior clinicians in both jugular veins. I did not research on the success rate of CVC about senior or junior clinician. However, according to my research findings, we can say that use of the ultrasound guidance during CVC improves success rate both senior and junior clinicians.

Finally, Yong Han Kim suggested that ultrasound guided CVC technique is superior to the landmark technique.⁴ Similarly, my research emphasized that the use of ultrasound guidance during CVC instead of a blind landmark method reduces CVC time and rates of unsuccessful catheterization as well as the incidence of carotid artery puncture and hematoma.¹ Therefore, I totally agreed with ultrasound-guided technique is superior to the landmark technique.

Nurkay Katrancioglu,

Department of Cardiovascular Surgery Cumhuriyet University, School of Medicine Sivas, Turkey

ORCID ID: orcid.org/0000-0002-6075-7879

References

- 1. Katrancioglu N. Unusual mechanical complications of central venous catheterization. *Saudi Med J* 2019; 40: 287-291.
- 2. Qin XH, Zhang H, Mi WD. Anatomic relationship of the internal jugular vein and the common carotid artery in Chinese people. *Chin Med J (Engl)* 2010; 123: 3226-323
- Ergil J, Özmen M, Akkaya T, Özkan D, Gümüş H. Assessment of the Ability of Anaesthetists to Locate the Internal Jugular Vein by the Anatomic Landmark Technique with Ultrasonography: Right or Left, Does it Make any Difference? *Turk J Anaesthesiol Reanim* 2013; 41: 167-170.
- Karakitsos D, Labropoulos N, De Groot E, Patrianakos AP, Kouraklis G, Poularas J, et al. Real-time ultrasound-guided catheterisation of the internal jugular vein: a prospective comparison with the landmark technique in critical care patients. *Crit Care* 2006; 10: R162.