

Central Venous Cannulation of the Internal Jugular Vein Both With and Without Ultrasound Guidance in Iran

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Dear Editor,

We read with great interest the article recently published in your journal about central venous cannulation of the internal jugular vein using ultrasound (US)-guided and anatomical landmark (AL) techniques in Iran (1). In their study, Fathi et al. concluded that the AL technique is superior to the US-guided method in Iran. As you are aware, the physician's skill is the most important confounder for this outcome; others include the procedure's location and the patient's condition.

We conducted a similar study in 100 patients who were referred to our emergency department (ED) (2). Emergency medicine residents performed the cannulations in our study; this procedure differed from that of Fathi et al., where anesthesiologists placed the cannulations in the operating room (OR). We concluded that the US-guided method was superior, while Fathi et al. found no significant differences between the two groups. The anesthesiologists in their study were more experienced with the AL method, but our study had no procedure for selecting a specific method. We also measured the access time, which was significantly lower in the US-guided group compared to the AL group. In our study, the mean access time in the US-guided group was greater than that reported by previous studies, which reflects the inexperience of our resident physicians in the US-guided method. However, the cannulation time in our AL group was faster than that reported in earlier studies, which indicates that our physicians have more experience in cannulation using anatomical landmarks. Therefore, in addition to promoting the US-guided method, we should also offer training in the AL method. Our study also found that patients' gender, body mass index, and the side of cannulation (right/left) are other confounders that should be matched between the

groups. These confounding factors must be controlled in future studies. We also suggest that similar studies should be conducted in different places (e.g., the OR, wards, and the ED) and by other specialists (e.g., surgery residents or attendings) before drawing further conclusions.

References

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