



## Importance of Dermatotomy Incision without Residual Skin Bridge during Central Venous Catheterization

Jonathan K. Frogel<sup>1</sup> and Jacob Jeffrey Rauchwerger<sup>2</sup>

<sup>1</sup>Department of Anesthesiology, Sheba Medical Center, Ramat Gan, Israel, <sup>2</sup>Department of Anesthesiology, Mount Sinai South Nassau Hospital, NY, USA

Dear Editor:

We read with great interest Dr. Tayebi's description of the endovascular removal of an entrapped central venous catheter guidewire in the March issue of *Vascular Specialist International* [1]. We commend Dr. Tayebi for both the in-



**Fig. 1.** Guidewire in the right internal jugular vein after an attempted incision with a standard #11 scalpel (left of image is cephalad, right of image is caudad). Notice the residual skin bridge between the wire insertion site and the dermatotomy incision. Non-contiguous dermatotomy incisions such as this one can make dilator and catheter passage difficult and predispose to wire related complications.

genious approach to this problem and the review of guidewire-related complications during central venous catheter placement.

Guidewire kinking, knotting, and fracture can and do occur during multiple-step central venous catheter placement using the Seldinger technique [2,3]. In addition to the author's recommendation to avoid advancing the guidewire against resistance, attempts to advance dilators or catheters through the skin with force or in a direction not parallel to the in situ guidewire can result in guidewire kinking, looping, and fracture. In our practice, we emphasize making a small dermatotomy incision at the wire entry site prior to any attempts to advance catheters or dilators over the wire and into the vessel. It is imperative that this incision be made contiguous with the wire entry site, as residual skin bridges (Fig. 1) often necessitate the use of excessive force for device passage and increase the risk of wire-related complications.

### CONFLICTS OF INTEREST

The authors have nothing to disclose.

### ORCID

Jonathan K. Frogel

<https://orcid.org/0000-0002-2685-1693>

Jacob Jeffrey Rauchwerger

<https://orcid.org/0000-0002-0768-0817>

Received May 8, 2020, Revised May 31, 2020, Accepted June 3, 2020

Corresponding author: Jacob Jeffrey Rauchwerger, Department of Anesthesiology, Mount Sinai South Nassau Hospital, Sheba Medical Center, One Healthy Way, 11572 NY, USA

Tel: 7186408343, E-mail: [jacobjeffrey74@hotmail.com](mailto:jacobjeffrey74@hotmail.com), <https://orcid.org/0000-0002-0768-0817>

Copyright © 2020, The Korean Society for Vascular Surgery

This is an Open Access article distributed under the terms of the Creative Commons Attribution Non-Commercial License (<http://creativecommons.org/licenses/by-nc/4.0>) which permits unrestricted non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

Vasc Specialist Int 2020;36(2):122-123 • <https://doi.org/10.5758/vsi.200028>

---

**REFERENCES**

---

- 1) Tayebi P. Endovascular removal of entrapped central venous catheter guide wire. *Vasc Specialist Int* 2020;36:45-48.
- 2) Khasawneh FA, Smalligan RD. Guidewire-related complications during central venous catheter placement: a case report and review of the literature. *Case Rep Crit Care* 2011;2011:287261.
- 3) Park SK, Yi IK, Lee JH, Kim DH, Lee SY. Fracture of J-tipped guidewire during central venous catheterization and its successful removal under fluoroscopic guidance- a case report-. *Korean J Anesthesiol* 2012;63:457-460.