## **CORRESPONDENCE**

## Compartment Syndrome of the Arm from Intravenous Infiltration during Radial Artery Catheterization

To the Editor:

We thank Jue and colleagues for presenting their case of compartment syndrome resulting from radial access.<sup>1</sup> As they observed, this is a rare sequela of radial artery catheterization, and compartment syndrome is not typically in the differential diagnosis for hand or arm pain after radial access.

We had a similar case. One of our patients underwent diagnostic peripheral angiography via radial access. There were no problems attaining radial artery access or inserting the sheath. Sheath removal was uneventful and without hematoma development. However, upon returning to his room, the patient reported forearm pain and paresthesia. His compartment pressures were elevated. Because of his symptoms, we performed exploratory surgery and fasciotomy. Intraoperatively, there was no evidence whatsoever of bleeding in the forearm, of side-branch arterial injury, or of hematoma. After further investigation, however, we discovered that the patient's forearm intravenous catheter had infiltrated a substantial amount of saline solution before its uncomplicated removal.

We bring this up to point out that the differential diagnosis for compartment syndrome includes intravenous infiltration.<sup>2-5</sup>

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## References

- 1. Jue J, Karam JA, Mejia A, Shroff A. Compartment syndrome of the hand: a rare sequela of transradial cardiac catheterization. Tex Heart Inst J 2017;44(1):73-6.
- Yamaguchi S, Viegas SF. Causes of upper extremity compartment syndrome. Hand Clin 1998;14(3):365-70, viii.
- Ibey A. Pediatric compartment syndrome caused by intravenous infiltration. Ann Plast Surg 2012;69(3):340.
- Schmit BM, Freshwater MF. Pediatric infiltration injury and compartment syndrome. J Craniofac Surg 2009;20(4):1021-4.
- Dieter RS, Dieter RA Jr, Dieter RA III, Nanjundappa A, editors. Critical limb ischemia: acute and chronic. Springer International Publishing Switzerland; 2017.

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