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## Reply



I thank Dr Woronow and colleagues for their letter to the Editor recognizing the absence of neurologic and cardiac adverse events (NCAEs) in my recently published case series regarding outcomes from 250 patients treated with Food and Drug Administration-approved polidocanol microfoam 1%.<sup>1</sup> The safety profile demonstrated in phase 3 clinical trials was the rationale for incorporating this treatment in my practice in place of physician-compounded foam (PCF). The analysis in Dr Woronow's letter revealed 23 leg vein sclerotherapy NCAE cases with use of PCF. NCAE cases are likely the result of gas emboli that occur in using foams made with room air that have a high nitrogen content. Polidocanol microfoam 1% has a low nitrogen content (<0.8%) to reduce the risk of neurologic complications.

Before adopting polidocanol microfoam 1% in my practice, I refrained from using PCF because of the published reports of patients who suffered significant neurologic events after treatment, including stroke, seizure, and transient ischemic attack.<sup>2-7</sup> I also noted that the existence of a patent foramen ovale (PFO) may contribute to the increased risk of NCAE. In the analysis performed by Dr Woronow, more than half of the patients with NCAEs had a PFO. This incidence was similar to an analysis of 82 patients undergoing polidocanol microfoam 1% ablation of the great saphenous vein.<sup>8</sup> In that study,

61% of the patients were PFO positive. In another study, middle cerebral artery bubbles were detected during polidocanol microfoam 1% ablation in 89% of the PFO-positive patients and 29% of PFO-negative patients. No patients displayed evidence of cerebral or cardiac microinfarction 30 days after treatment, nor did they display any adverse neurologic signs or elevated cardiac troponin I.<sup>9</sup> Therefore, if arterial bubble emboli are unavoidable during the injection of sclerosant foam, it is critical to select a Food and Drug Administration-approved formulation that minimizes risk to the patient.

I have since treated 420 patients with polidocanol microfoam 1%. My patients continue to benefit from treatment, with no NCAEs reported.

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