

# Hyaluronic Acid Filler Injection Technique in Multiple Layers of the Nasolabial Fold

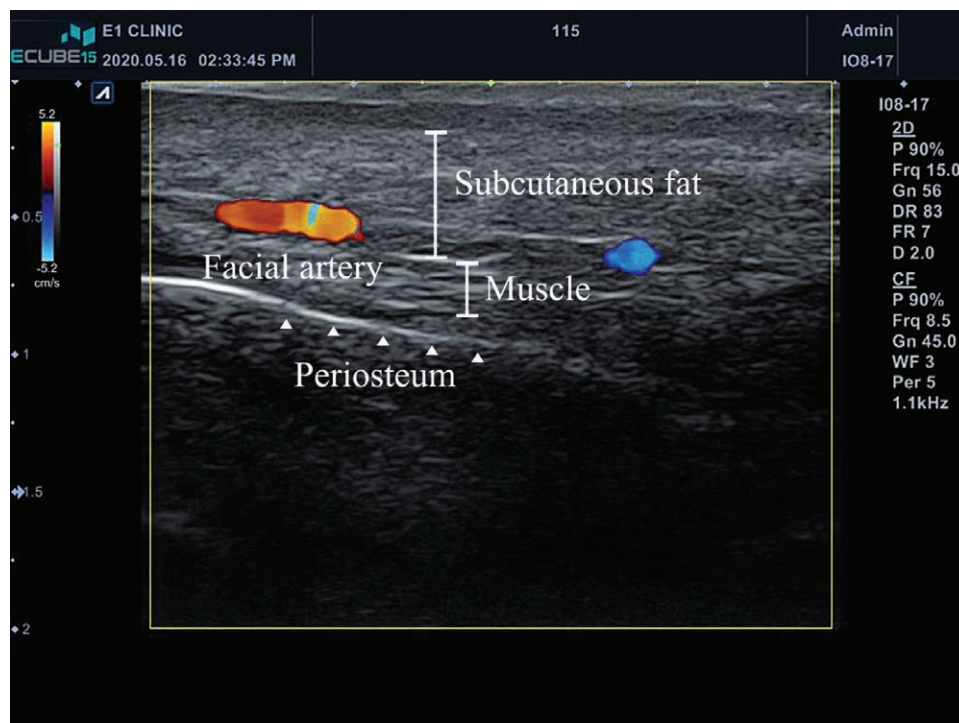
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Sir:

As mentioned by the author in his publication,<sup>1</sup> to resolve the nasolabial fold (NLF), filler injection is most commonly used. In the study, fillers were injected in multiple layers of the NLF. However, we would like to discuss some complications associated with this technique.

First, the facial artery is one of the largest arteries in the face and it runs near the NLF. Lee et al<sup>2</sup> described

variations in the course and depth of the facial artery and reported that more than 70% of the facial arteries were found at the NLF. The author of this article described injecting the filler at the suprapariosteal, deep and superficial fatty layers, and subdermal layer,<sup>1</sup> but as seen in another study,<sup>2</sup> filler injection in the deep and superficial fatty layers can be dangerous. Ultrasound shows that the facial artery can be detected at the NLF.<sup>3</sup>



**Fig. 1.** Doppler ultrasound image of facial artery located in the subcutaneous layer at the NLF.

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In addition, it was found that 29% of the facial arteries run in the subcutaneous layer.<sup>3</sup> Ultrasonographic image of the facial artery at the NLF area is shown in [Figure 1](#). This means that filler injection in multiple layers is a very dangerous procedure as vascular injuries can occur, resulting in tragic complications such as skin necrosis.

Second, the author did not mention the diameter of the cannula and compared to the puncturing needle, the cannula seemed to be smaller than 25 G. The outer diameter of a 25 G cannula is 0.51 mm, and the facial artery diameter is described to be 1.7–3.6 mm.<sup>4</sup> This shows that a cannula can perforate the facial artery anytime, resulting in vascular complications. Clinicians should not be overly confident when using a cannula for injecting the filler. A

recent article shows that a 27-G cannula can be as dangerous as a 27-G needle.<sup>5</sup>

Third, to describe specific fillers as being highly elastic or cohesive, rheological data should be provided. The author described Yvoire Y solution 720° as having high particle elasticity and stated that this is characteristic of a biphasic filler. However, he described Yvoire Y solution 540° as having low particle elasticity. As far as we know, Yvoire Y solution 540° also has characteristics of a biphasic filler. Usually, hyaluronic acid filler has rheological properties like high elastic modulus (characteristic of a biphasic filler) or high cohesiveness (characteristic of a monophasic filler). “High particle elasticity” was unclear when the nature of the filler was described. Furthermore, the particle size and rheological data of the filler used in the research were not provided. We would prefer it if hyaluronic acid was described as being volumizing at deep to mid-levels rather than having a high or low particle elasticity.

Filler injection is a relatively easy esthetic procedure; nevertheless, surgeons must be aware of the possible vascular complications associated with this procedure.

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## DISCLOSURE

*The authors have no financial interest to declare in relation to the content of this article.*

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