

Does size matters for the treatment of varicose veins with cyanoacrylate glue

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Endovenous closure of the saphenous vein with cyanoacrylate glue is a novel therapy with high closure rates. However, in obese patients with enlarged saphenous veins this modality might not be the best therapy option due to early recurrence.

Nonthermal, nontumescent endovenous treatment of varicose veins became possible with the introduction of cyanoacrylate glue with high closure rates

and with less discomfort in comparison to other techniques. Diameter of the target vein is always an issue in this type of treatments. During endovenous thermal therapies the usage of high volume of tumescent anesthesia causes collapse of the vein walls getting in contact with the heat source. However, in veins with large diameter in the groin glue volume might not be enough to close the veins.

Herein we present early recurrence in an obese patient who was treated by means of cyanoacrylate glue.

Key Words: Varicose vein; Cyanoacrylate glue; Endovenous treatment

CASE REPORT

33-year-old male patient was treated with cyanoacrylate elsewhere. Six months later he was referred to my office with the reappearance of the varicose veins (Figure 1). Ultrasonographic examination showed patent saphenous vein of 1.5 cm diameter with irregular lumen from saphenofemoral junction to the knee level. Under general anesthesia high ligation with stripping was performed uneventfully. The specimen was examined by the pathology department.



Figure 1) Recurrence in an obese man with saphenous vein of 1.5 cm.

DISCUSSION

Cyanoacrylate polymerizes quickly on contact with blood during endovenous treatment initiating rapid occlusion of the veins. Intima is detached with swelling and loosening of the media [1-3]. During this type of therapy, the distance of the catheter tip from the saphenofemoral (SFJ) junction is important in order to avoid deep vein extension of the glue. However, if it is placed far below, then the stump length will be long, and recurrence is likely originate from the branches left open. 5 cm length is a reliable distance from the SFJ. But it was found that the length of the stump depends on the size of the vein. Larger the vein longer is the stump [4]. In our case glue was found attached to one part of the wall (Figure 2).



Figure 2) Cyanoacrylate glue attached to one part of the vein wall.

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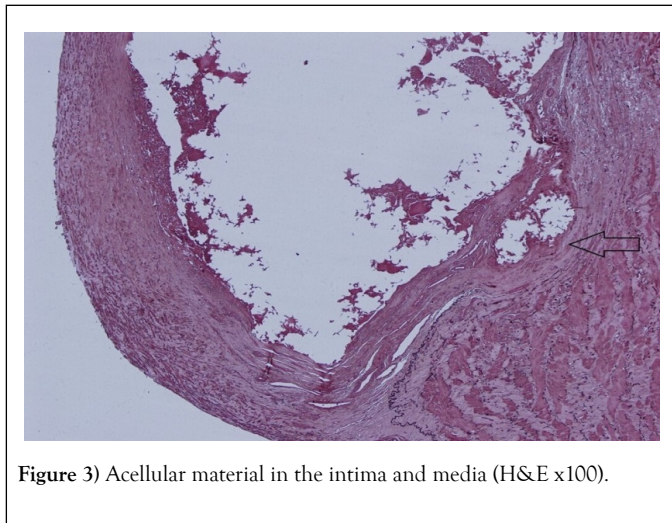
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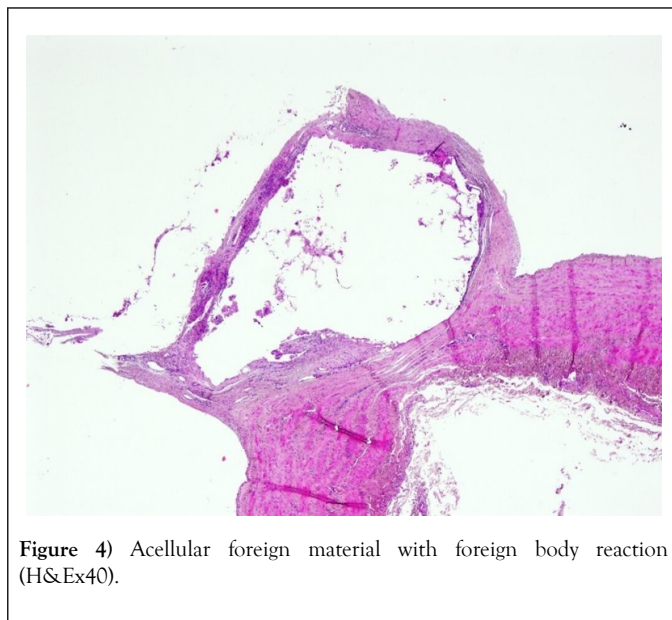


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Pathological examination revealed acellular foreign material with foreign body reaction in the intima and media (Figure 3).



Also, foreign body with reaction was detected in the adventitia (Figure 4).



This finding points out that cyanoacrylate could traverse the vein wall causing extravasation. In a recent article by Langridge et al. extravasation with foreign body reaction necessitating surgical revision was reported as a novel complication which should be included in the consent form [5]. Kubat et al. investigated the optimal treatment technique for great saphenous vein with diameters of ≥ 10 mm and found better occlusion rates with endovenous thermal ablations [6].

CONCLUSION

In obese patients with large diameter saphenous veins, inability to compress the vein during injection and the difficulty obtaining a short remnant stump will result in higher recurrence rates.

REFERENCES

1. Kolluri R, Chung J, Kim S, et al. Network meta-analysis to compare Vena Seal with other superficial venous therapies for chronic venous insufficiency. *Journal of Vascular Surgery: Venous and Lymphatic Disorder.* 2020; 1- 10.e3.
2. Kim J, Joh JH, Park HC. Effect of saphenous vein diameter and reflux time on stump length after cyanoacrylate closure. *Exp Ther Med.* 2019; 18(3):1845-49.
3. Tekin Aİ, Tuncer ON, Memetoğlu ME, et al. Nonthermal non-tumescendovenous treatment of varicose veins. *Ann Vasc Surg.* 2016; 36:231-35.
4. Park I, Kim D. Correlation between the immediate remnant stump length and vein diameter after cyanoacrylate closure using the Venaseal system during treatment of an incompetent great saphenous vein. *Vasc Endovascular Surg.* 2020; 54(1):47-50.
5. Langridge BJ, Onida S, Weir J, et al. Cyanoacrylate glue embolisation for varicose veins. A novel complication. *Phlebology.* 2020.
6. Kubat E, Ünal CS, Geldi O, et al. What is the optimal treatment technique for great saphenous vein diameter of ≥ 10 mm? Comparison of five different approaches. *Acta Chir Belg.* 2019; 1-8.