

CASE REPORT

A Case with Not Relux Flow Detection with Leech Therapy for 6 Months Follow-Up in Venous Insufficiency

Abdulkadir Kaya^{1*}  Tarik Sari²  Rabia Sebnem Yakisan Maden³ 

¹ Department of Family Medicine, Medicine Faculty, Duzce University, Duzce, Turkey

² Dereli Tütüncü Family Health Center, Duzce, Turkey

³ Koc yazı Family Health Center, Duzce, Turkey

*Corresponding Author: Abdulkadir Kaya, e-mail: dra.kadir@hotmail.com

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Abstract

Chronic venous insufficiency is an important and frequent disease, characterized by the retrograde flow of blood in the lower extremity, is a common, debilitating disorder that is increasing in prevalence. Leech therapy is a traditional healing method for centuries and it has taken its place in modern medicine because of application areas with broad spectrum. Leech therapy is also used in the treatment of venous congestion. In this study, a case in which a patient with a high-level venous insufficiency was almost completely cured, is presented.

Keywords: Hirudotherapy, Venous insufficiency, Reflux flow in varices

INTRODUCTION

Venous diseases may occur in different forms up to painful varicose veins and even skin ulcers that are caused by serious venous insufficiency. Chronic venous insufficiency can cause loss of labor and life quality. Most of the lower extremity venous insufficiency originate from saphenous magna and parva veins^{1,2}. The most important reasons of varices are insufficiency in valves of saphenous vein, weakness of vein walls and arteriovenous fistulas. Venous insufficiency in lower extremities can display themselves in various types; some are telangiectasias, appearance of varice packages by veins that become clear, feeling of pressure and weight rash on ankle, eczematous dermatitis and venous ulcers³. Leech therapy is a traditional healing method for centuries and it has taken its place in modern medicine because of application areas with broad spectrum. *Hirudo medicinalis* is the most frequently used leech type in medical practice. American Food and Drug Administration

(FDA) labeled *H. medicinalis* for medical usage. Secretions of Leeches salivary gland have more than 100 different bioactive materials. It was reported that these secretions have vasodilator, bacteriostatic, analgesic anti-inflammatory and anti-coagulant effect. At the same time they were stated in various sources that they have antiedema effect, prevent microcirculation disorder, correct hypoxia and damaged vascular permeability of tissues, decrease blood pressure, increase immune response and cut the pain⁴⁻⁶. A case in which venous insufficiency is diagnosed by doppler usg and leech treatment was used is introduced in this article.

CASE

A 66-year- old female, diagnosed as high degree bilateral superficial venous insufficiency in lower extremity and middle degree deep venous insufficiency came to our clinic for leech treatment.

10 sessions of therapy were done collectively

including 3 times a week and in every session leeches were applied in both lower extremities. Patient's venous insufficiency degree was observed both after 10 sessions and 6 months later from treatment by Ataturk University Medical Faculty radiology department lecturers.

Rising of calibration in main femoral vein (MFV) deep femoral vein (DFV), superficial femoral vein (SFV) and popliteal vein (PV) bilaterally, and high degree slowdown of flow were observed in doppler usg before treatment. Reflux was

monitored along with valsalva maneuver in greater saphenous magna vein and saphenofemoral junction. And reflux in main femoral vein was observed 2-3 seconds with valsalva maneuver. These vessels' correct situation were healed in doppler usg after treatment. Minimally increased reflux degree was observed with valsalva only in left femoral vein. It was seen that any of abnormal condition or reflux was not observed with doppler usg 6 months later from treatment (Table 1).

Table 1. The results of changes of reflux flow during treatment and after treatment

<i>Before leech therapy</i>	It becomes visible due to high degree slowdown of flow and rising of calibration in main femoral vein deep femoral vein superficial femoral vein and popliteal vein bilaterally. Reflux was observed in greater saphenous vein and saphenofemoral junction along with valsalva maneuver, and reflux in MFV was observed for 2-3 second with valsalva maneuver.
<i>After leech therapy</i>	Lumen, diameter and compressibility of MFV, DFV, SFV and PV were bilaterally normal. Reflux was minimally appeared in left femoral vein.
<i>6 months later from leech therapy</i>	Lumen diameter and compressibility of MFV, DFV, SFV and PV were bilaterally normal. Reflux was not detected with valsalva maneuver in observed veins.

DISCUSSION

In this study, a case in which a patient with a high level venous insufficiency was almost completely cured, is presented. There are lots of study where leech therapy was applied to varicose veins in the literature.

In these studies meaningful results were obtained from patients who were treated with leeches^{7,8}. A result in addition to medical treatment, hirudotherapy is an alternative method in venous insufficiency.

REFERENCES

1. Biland L, Widmer LK. Varicose veins (VV) and chronic venous insufficiency (CVI). Medical and socioeconomic aspects, Basle study. *Acta Chirurgica Scandinavica. Supplementum*. 1988;544:9-11.
2. Youn YJ, Lee J. Chronic venous insufficiency and varicose veins of the lower extremities. *The Korean Journal Of Internal Medicine*. 2019;34(2):269.
3. Labropoulos N, Giannoukas AD, Nicolaides AN, Ramaswami G, Leon M, Burke P. New insights into the pathophysiologic condition of venous ulceration with color-flow duplex imaging: Implications for treatment?. *Journal of Vascular Surgery*. 1995;22(1):45-50.
4. Gödekmerdan A, Arusan S, Bayar B, Sağlam N. Tıbbi Sülükler ve Hirudoterapi. *Türkiye Parazitol Derg*, 2011;35:234-239.
5. Işık M, Aksoy FN. Tıbbî sülük tedavisi (hirudoterapi) ve Hacamat. *Sağlık Düşüncesi ve Tıp Kültürü Dergisi*. 2012;22:80-84.
6. Riede F, Koenen W, Goerdts S, Ehmke H, Faulhaber J. Medicinal leeches for the treatment of venous congestion and hematoma after plastic reconstructive surgery. *JDDG: Journal der Deutschen Dermatologischen Gesellschaft*. 2010;8(11):881-888.
7. Nigar Z, Alam MA. Effect of taleeq (leech therapy) in dawali (varicose veins). *Ancient Science of Life*. 2011;30(3):84.
8. Bapat RD, Acharya BS, Juvekar S, Dahanukar SA. Leech therapy for complicated varicose veins. *The Indian Journal of Medical Research*. 1998;107:281-284.