

Case Report

Varicose Veins of the Upper Extremity: Why and How We Treat Them?

Ioannis G Douvas, Konstantinos M Nikolakopoulos, Chrysanthi P Papageorgopoulou*, Ioannis Tsolakis

Department of Vascular Surgery, University Hospital of Patras, Patras, Greece

***Corresponding author:** Chrysanthi P Papageorgopoulou, Department of Vascular Surgery, University Hospital of Patras, 26504, Rio, Patras, Greece. Tel: +302610994052; Email: chrisanthi.papageorg@gmail.com

Citation: Douvas IG, Nikolakopoulos KM, Papageorgopoulou CP, Tsolakis I (2016) Varicose Veins of the Upper Extremity: Why and How We Treat Them? Cardiolog Res Cardiovasc Med 1: 105. DOI: 10.29011/2575-7083.000005

Received Date: 16 July, 2016; **Accepted Date:** 02 August, 2016; **Published Date:** 16 August, 2016

Abstract

Primary varicose veins of the upper extremity constitute a rare pathological entity with a few references in the literature, in contrast to those of the lower extremity. The diagnostic approach is necessary in order to eliminate the case of secondary varicose veins, whereas the therapy is similar to those of the lower extremity. We present the case of a 37-year-old male with primary varicose veins of the upper extremity, at the distribution of basilic vein.

Keywords: Basilic Vein; Primary Varicose Veins; Secondary Varicose Veins; Vascular Ultrasound

Introduction

Varicose veins of the upper extremity are rare, whose etiology seems to be common with those of the lower extremity, without a clear proof. The differential diagnosis of the secondary varicose veins includes the arterio-vein communication and the deep venous thrombosis. If, however, the varicose veins are indeed primary, the therapeutical plan is the same with those of the lower extremity. We present the case of a 37-year-old male with primary varicose veins of the upper extremity who was submitted for surgical treatment.

Case Report

A 37-year-old male presented at the out-patient clinic of our department of our hospital with varicose veins of the left upper extremity, in the base of forearm and in the distribution of the basilic vein, appeared twenty (20) years ago (Figure 1). He had a history of saphenectomy and avulsions of varicose veins of his left lower limb three years ago. From his family history only, his mother had varicose veins of both the lower extremities.



Figure 1: Clinical presentation of primary varicose veins of the upper extremity.

During clinical examination, the patient presented swelling and pain of the left upper forearm after fatigue. No trauma was referred either from lifting weight or from injury. The extremity's skin was normal, without the presence of hemangioma. Bilateral pulses were normal, without the presence of bruit, whereas both

extremities had the same size.

The color flow doppler ultrasound confirmed the presence of varicose veins without the existence of arterio-vein communication or deep venous thrombosis. He was submitted for surgical removal (Figure 2) of the varicose veins by stub avulsion technique, under general anesthesia (Figure 3). The post operative recovery was uncomplicated, whereas 4 months later no varicose veins were reappeared.



Figure 2: Pre-operative marking.



Figure 3: No reappearance of varicose veins 4 months after the procedure.

Discussion

Varicose veins are characterized by dilation, tortuosity and elongation of the vein subcutaneous system. They differentiate into primary and secondary. The primary varicose veins are caused by the valve's insufficiency, the vein's wall leanness and they are hereditary even in their trackmen. The secondary varicose veins

appear in the vein network because of either deep vein thrombosis or arterio-vein communication [1].

Primary varicose veins of the upper extremity seem to have the same cause with those of the secondary, but with very low prevalence. This fact seems to be caused by the increased hydrostatic pressure that exists in the lower extremity in the standing position in relationship with those of the upper [2].

On the contrary, secondary varicose veins are caused by the deep vein thrombosis and the arterio-vein communication, congenital or acquired. The deep vein thrombosis can be primary-Paget-Schrotter syndrome-and is caused by the outlet thoracic syndrome, or secondary which is caused by conditions favor hyper coagulation such as thrombophilia, neoplasms and sarcoidosis, after placement of central vein catheters as and in the out-pressure that is applied by tumors of the lung. The result of the obstruction in the vein flow is the formation of collateral circulation and the consequent vein hypertension, which leads to the appearance of varicose veins [3].

The relative arterio-vein communication is due mainly in the Klipper-Trenaunay syndrome and to the Parkes-Weber. The Klipper-Trenaunay syndrome is characterized by the triad: a) varicose veins, b) subcutaneous hemangioma, c) hypertrophy of the mild particle-bone [4], as it is referred in the original publication of the syndrome, whereas Parkes-Weber is characterized by arterio-vein communication and local hypertrophy [5]. Arterio-vein communication and varicose veins are the common denominator of the two syndromes that is the reason they are often erroneous referred as a common entity, Klipper Trenaunay-Weber. The acquired arterio-vein communication is either a result of vascular access for haemodialysis in patients with chronic renal failure (AV Fistula or AV graft) or as a result of injury.

The diagnostic approach of the varicose veins of the upper extremity is based on the receipt of a good history, on clinical examination and laboratory investigation with color flow doppler ultrasound and phlebography, in special occasions. The primary objective is the distinction between primary and secondary varicose veins. Regarding phlebography (classic, magnetic or computed), it is important and necessary in the case reports where the clinical picture and the color flow doppler ultrasound do not reveal the cause clearly. In the case report that was presented, the clinical and laboratory approach was indicative of primary varicose veins, therefore no phlebography was needed.

The treatment of primary varicose veins of the upper extremity is similar to that of the lower extremity. The cornerstone of treatment is the surgical removal with general, local or epidural anesthesia combined if it's possible with stripping of longer segments [6]. Sclerotherapy can also be used as an alternative or complementary therapy as well as Laser ablation.

Conclusion

Primary varicose veins of the upper extremity are a diagnostic and therapeutic challenge. The combination of a good history, accurate clinical examination and color flow Doppler ultrasound is the cornerstone of diagnosis and treatment.

Declaration of Conflicting Interests

The authors report no financial relationships or conflicts of interest regarding the content herein.

Funding

This research received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors.

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