Reverse Foam Sclerotherapy of the Great Saphenous Vein with Sapheno-Femoral disconnection Compared to Standard Stripping

Thesis

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By

Mohammed Ibrahim Maamoun

Supervised by

Prof Dr. Hussein Mahmoud Khairy

Professor of general surgery

Cairo University

Ass. Prof Dr. Hesham Nabil Abdelmooty

Ass. Professor of general surgery

Cairo University

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(قالوا سبحانك
لا علم لنا إلا
ما علمتنا إنك
أنت العليم
الحكيم)

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Dedication

I like to dedicate this work to the soul of my father and the soul of my ex-professor Dr Adel M. Ilham, who supported and guided me a lot.

Acknowledgment

At first, I thank ALLAH who enlightened my way and directed me to every success I have reached and I might reach in the future.

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Abstract

The Surgery group post operative discomfort and pain ranged from severe to reasonable while thigh bruising ranged from mild to severe and thrombophlebitis was absent. It was clear that patients of surgery group took much higher analgesics than foam treatment group standard SFJ ligation and stripping of the GSV are not associated with major discomfort and problems in the early post-operative period while SFJ ligation and GSV reverse foam sclerotherapy yielded good patient satisfaction with less postoperative bruising and discomfort and reduced analgesic requirements.

KEY WORDS

Sclerotherapy
Disconnection
Sapheno-Femoral

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Aim of the work

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To evaluate Sapheno-femoral ligation and reverse foam sclerotherapy of the great saphenous vein versus sapheno-femoral ligation and standard stripping for the treatment of varicose veins regarding follow and extent of improvement in presenting symptoms in the cases included in the study.

Introduction

Introduction

Varicose veins are dilated, tortuous, twisted, or lengthened veins, can be classified as trunk, reticular, or telangiectasia. Most varicose veins are primary; only the minorities are secondary. The vein walls are inherently weak in varicose veins, which leads to dilatation and separation of valve cusps so that they become incompetent. Risk factors for varicose veins include increasing age and parity, and occupations that require long standing. **(Nick &Roddy; 2000)**

Symptoms associated with varicose veins include heaviness, tension, aching and itching. **(Bradbury et al; 1999)** While, complications of varicose veins include hemorrhage, thrombophlebitis, edema, skin pigmentation, atrophie blanche; varicose eczema, lipodermatosclerosis and venous ulceration, **(Campbell; 1996)**

Lower limb examination in patients with varicose veins should be performed while the patient is standing in addition to duplex ultrasound. **(Ruckley et al; 1998**) Clinical examination and duplex, establish the pathological morphology and hemodynamics of the varicose elements and their relationship to the superficial and deep venous networks, so allows every patient to receive an individualized therapy, either medical or surgical. **(Nguyen; 2005)**

The conventional surgical treatment of varicose veins involves disconnection of the Sapheno-femoral junction (SFJ) along with stripping of the great saphenous vein (GSV) and multiple phlebectomies. This achieves rapid relief of symptoms and has an acceptable long-term recurrence rate. **(Neglen; 2001)**

The occurrence of strip tract haematoma is a major side effect. This causes the patient postoperative pain and discomfort. It may also be responsible for recurrence when revascularization occurs in the haematoma. **(Davies et al; 1995)**

Even following apparently adequate ligation, incompetent communications between the SFJ and superficial varices arise due to recanalization and neovascularization. **(Winterborn; 2004)**

A number of new methods of endovenous treatment have been introduced in recent years to facilitate early ambulation and minimize postoperative discomfort. These include laser ablation, foam Sclerotherapy and radiofrequency. **(Campbell; 2002)**

Reverse Foam Sclerotherapy of the Great Saphenous Vein with Sapheno-Femoral disconnection is a novel technique of reverse delivery of foam sclerosant directly into the incompetent GSV to obliterate this vein rather than stripping it. Ablation of the Saphenous vein varicosity and reflux is done after completing the

flush ligation and division of the GSV at the SFJ. **(Abela R et al; 2008)**

Sclerosing foam is a mixture of gas and liquid sclerosing solution. Foam sclerosant was first described by Orbach in 1944, and has clear advantages over liquid in the treatment of larger varices and saphenous trunk incompetence. **(Hamel et al; 2003)** Administration of foamed sclerosant was reintroduced in the early 1990s by Cabrerra, who summarized a broad experience in 1997. Tessari developed an easy way of making liquid sclerosant into foam. (**Frullini A; 2003)**

Many different methods of producing homemade foam have been published, the most popular of which (and the one that we use) is the Tessari method. Tessari described a new technique of creating foam with small bubbles in 2000 using 2 syringes and a three-way tap to produce sclerosant foam. **(Tessari; 2001)**

Anatomy

Anatomy of the venous system of the leg

The leg can be regarded as a tube consisting of powerful muscles with veins running up the centre. The muscles are ensheathed by thick inelastic fascia. The muscles within the inelastic fascial sheath form a powerful pump mechanism which on contraction forces their contained venous blood inward to the main deep veins and then upwards. The direction of flow is governed by valves so that flow is from superficial to deep and from below upwards. **(Carr; 2006)**

Each limb has three anatomically and functionally distinguishable sets of veins:

SUPERFICIAL

The veins have relatively thick muscular walls. The major trunks are the long (great) and short (small) Saphenous veins. These trunks run in tunnels created by a condensation of superficial fascia. This support from the condensation of fascia explains why the greater Saphenous vein itself is very often not varicose while its tributaries are tortuous. **(Carr; 2006)**