Research Article

Sclerotherapy of Cutaneous Small Varicose Veins and Telangiectasias

Sameh M. Attia, Hossam M. Abdel-Wahab, Eman S. Abdel-Azim and Maha M. Ibrahim
Departement of Dermatology, El-Minia Faculty of Medicine

Abstract
Introduction: Sclerotherapy is the targeted elimination of small vessels (telangectesia, reticular veins) and varicose veins by the injection of a sclerosant. **Aim of the Work:** The aim of the work is to evaluate the efficacy of sclerotherapy in the treatment of cutaneous small varicose veins and telangiectasia. **Patients and methods:** This study was conducted on 34 patients with telangectesia and small cutaneous varicose veins. The cases were selected from those attending the Vascular Surgery and Dermatology Outpatient Clinic at Minia University Hospital. They were gathered through a period of 2 years from January 2014 to January 2016. **Results:** This table shows that clinical improvement was excellent in 17 patients (50%) very good in 12 patients (35.3%) good in 4 patients (11.8%) and fair in 1 patient (2.9%). **Recommendations:** We recommend the efficacy and safety of sclerotherapy using polidocanol (as sclerosant agent) in the treatment of cutaneous small varicose veins and telangiectasias based on clinical and histological analysis.
Keywords: Sclerotherapy, varicose veins, telangectesia

Introduction
Varicose veins (VV) are a common problem that cause disfigurement, disability and impairment in the quality of life. About 17-50% of patients with varicose veins may have cutaneous findings; including stasis dermatitis, ankle oedema, spontaneous bleeding, superficial thrombophlebitis, recurrent cellulitis, lipodermatosclerosis and ulceration of the ankle and foot. Varicose veins and its related complications are commonly seen in the dermatology clinics[8]. Telangiectasia is the dilation of dermal capillaries mainly due to hypertension and vein insufficiency. Skin telangiectasia is an aesthetic defect characterized by an unpleasant appearance, but, it is also characterized by discomfort, itching, and a high rate of bruising[9]. The presence of visible leg veins can affect self-esteem and social behavior because of emotional distress about the appearance of the affected leg[3]. Sclerotherapy is a technique used to treat telangiectasias as well as VV that are amenable to non-surgical intervention.[7] A liquid or foam sclerosing agent is injected into the vein with the aim of causing targeted, localized damage to the endothelium that leads to inflammation, thrombus formation, collapse and fibrosis of the vessel. It has been extensively used by dermatologists and vascular surgeons in the management of superficial varicose veins and other venous abnormalities[5].

Aim of the Work
The aim of the work is to evaluate the efficacy of sclerotherapy in the treatment of cutaneous small varicose veins and telangiectasia.

Patients and methods
This study was conducted on 34 patients with telangectesia and small cutaneous varicose veins. The cases were selected from those attending the Vascular Surgery and Dermatology Outpatient Clinic at Minia University Hospital. They were gathered through a period of 2 years from January 2014 to January 2016.

The patients were divided into 2 main groups according to The CEAP classification (Table 1) as follow:
Group (1): Patients with telangectesia (C1):14 females and 1 male.
Group (2): Patients with varicose veins (C2) : 19 females.

Inclusion criteria:
The inclusion criteria for the study were patients with varicose, reticular and/or telangiectatic veins having cosmetic problems and/or pain (uncomplicated VV and telangiectesia).

Exclusion criteria:
The various exclusion criteria for the study were; (a) deep venous thrombosis. (b) saphenofemoral junction / saphenopopliteal junction incompetence (c) pregnancy.(d) myocardial decompensation. (e) hyper-coagulable state. (f) dependency edema. (g) arterial disease. (h) complicated cases of VV and telangiectesia.

An informed consent has been obtained from all patients be enrolled in the study to be photographed & to have a skin biopsy. Venous duplex ultrasound was done to all patients.

Results

Analysis of the efficacy of sclerotherapy was based on the ability of the injection to promote the disappearance of the reticular veins after 60 days of treatment (D60). Photo analysis was used to evaluate efficacy (from D0 to D60), which was performed by two dermatologists at the Dermatology department of Minia University Hospital. The improvement was excellent in 17 patients (50%) very good in 12 patients (35.3%) good in 4 patients (11.8%) and fair in 1 patient (2.9%). In our study pain improvement was considered good to excellent improvement in 22 (95.6%) out of 23 patients who reported pain while only one patient reported fair improvement. After the 2-month follow-up, no complications were observed among 25 patients out of 34 (73.5%) involved in this study Hyperpigmentation was reported only in 5 patients (14.7%); ulceration was reported in 3 patients (8.8%) and one thrombus formation (2.9%). Examination of H&E stained sections taken from 15 patients at baseline and one week after sclerotherapy revealed: The endothelium had disappeared from most areas about the circumference of the vessel, and the resulting denuded areas are covered by a thin layer of fibrin. In some biopsies, starting organization of the clot could be detected in which the thrombus is invaded by cellular elements(leucocytes, fibroblasts and capillaries).

Clinical improvement of the study group

Clinical improvement	The study group N = 34
Fair	1 (2.9%)
Good	4 (11.8%)
Very good	12 (35.3%)
Excellent	17 (50%)

Discussion

This study aims to evaluate the efficacy and safety of sclerotherapy using polidocanol (as sclerosant agent) in the treatment of cutaneous small varicose veins and telangiectasias based on clinical and histological analysis. Liquid injection sclerotherapy is the gold standard for the treatment of the majority of lower extremity telangiectasias and reticular veins [(7)]. Foam sclerosants have effectively replaced liquid agents due to their physiochemical properties resulting in better clinical outcomes[(2)]. Sclerosant foam was developed from the detergent sclerosant agents to increase the surface area of exposure [(1)]. Polidocanol either a liquid or foamed sclerosant offers a wide safety margin against necrosis by extravasation. Its application is painless and possesses an anesthetic effect[(6)]. In our study, polidocanol was used in its liquid form for treatment of telangiectasias & reticular veins and as a foam for treatment of VV. Pain, heaviness (67.6%) and cosmetic concern (32.4%) were the main symptomatology of our selected patients. This correlates with the study of[(5)] who reported that the commonest presentation was that of dilated veins; pain (76%), eczema (80%), oedema (30%) and ulceration (30%), this disparity is due to their study was conducted on VV with its complications while our study was done on

selected uncomplicated VV and/or telangiectasias. In our study, pain improvement was considered good to excellent improvement in 22 (95.6%) out of 23 patients who reported pain while only one patient reported fair improvement, this correlates with the study of[4] who reported that (78%) of patients showed improvement in pain.

Conclusion

Sclerotherapy is the targeted elimination of small vessels (telangectesia, reticular veins) and varicose veins by the injection of a sclerosant. The aim of sclerotherapy is to damage the vessel wall and transform it into a fibrous cord that cannot be recanalized. In conclusion, sclerotherapy is a simple, safe, and effective procedure for the treatment of varicose veins and telangiectasia of the lower limb. When the procedure is done with adequate precautions, there are relatively very few complications which are usually minor.

Recommendations

We recommend the efficacy and safety of sclerotherapy using polidocanol (as sclerosant agent) in the treatment of cutaneous small varicose veins and telangiectasias based on clinical and histological analysis.

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