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Comparison of Ambulatory Phlebectomy and Compression Sclerotherapy for Varicose Veins

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ABSTRACT

Background: To compare ambulatory phlebectomy and compression sclerotherapy for varicose veins.

Material and Methods: Sixty- four cases of varicose veins of both genders were randomly divided into 2 groups of 32 each. Group I underwent ambulatory phlebectomies and group II underwent foam sclerotherapy. Parameters such as Clinical Etiology-Anatomy-Pathophysiology (CEAP), diameter of great saphenous vein, presenting primary symptoms, Grading of primary symptom relief, change in disease severity and post-procedure symptoms were compared.

Results: Group I comprised of 17 males and 15 females and group II had 16 males and 16 females. Parameters CEAP C2–C3 legs was seen in 26 and 27, C4–C6 legs was seen in 6 and 5, GSV diameter was 8.6 mm and 7.5 mm, The mean procedure time was 40.2 minutes and 25.3 minutes. Primary symptoms were pain in 13 and 11, oedema in 5 and 3, night cramps in 8 and 5, bleeding in 2 and 7, ulcer in 6 and 4 and itching in 7 and 3 in group I and II respectively. Post-procedure symptoms were transient skin pigmentation in1 and 3, superficial thrombophlebitis in 0 and 2, bleeding in 1 and 3, transient loss of sensation in 0 and 1 and small ulcers in 1 and 4 in group I and II respectively. The difference was significant (P< 0.05). Good improvement (+3) was seen in 85% and 60%, moderate improvement (+2) in 10% and 20%, mild improvement (+1) in 5%and 8%, unchanged (0) in 0 and 7% and mild worsening (-1) in 0 and 5% in group I and II respectively.

Conclusion: Ambulatory phlebectomy is an effective therapy for varicose veins of the leg. Primary symptom reliefare significantly higher in ambulatory phlebectomy group.

Keywords: Ambulatory phlebectomy, ClinicalEtiology-Anatomy-Pathophysiology, Varicose veins.

INTRODUCTION

Varicose veins are enlarged, bulging superficial veins that can be felt beneath the skin, generally larger than 3-mm in diameter. Approximately one-third of the adult population have varicose veins. Their valves are usually incompetent so that reflux of blood occurs, and the resulting venous hypertension can cause symptoms.[1] Varicose veins are widely seen as medically unimportant and deserving low priority for treatment. They are common, affecting nearly a third of adults in Western societies and few people with varicose veins are ever harmed by them.[2]

Chronic venous disease causes a significant negative effect on the quality of life (QoL) of patients; however, there is a significant improvement in the QoL following treatment for varicose veins.The combination of compression therapy with intravenous injection of a sclerosing agent for the treatment of varicose veins was introduced in 1953.[3] Early studies

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indicated that this compression sclerotherapy (Sclero) would be an efficient addition to the varicose vein surgery in use at the time. Although ambulatory phlebectomy (AP) was ‘‘invented’’ around the same period, this technique needed more time to become well-established worldwide.[4] Ambulatory phlebectomy is a good choice for treating both asymptomatic and symptomatic superficial veins from the skin. It is usually performed on larger veins that bulge above the surface of the skin and varicose veins. It also rarely is used on smaller veins. Ambulatory phlebectomy may be combined with other therapies in the treatment of venous disease. The procedure is not recommended for patients unable to walk on their own or wear compression stockings.[5] Considering this, we planned present study to compare ambulatory phlebectomy and compression sclerotherapy for varicose veins.

MATERIAL & METHODS

A sum total of sixty- four cases of varicose veins of both genders were selected for the study. All were agreed to participate in the study. Ethical approval was also obtained before starting the study.

Demographic profile of each patient was recorded. Patients were randomly divided into 2 groups of 32 each. Group I underwent ambulatory phlebectomies and group II underwent foam sclerotherapy. Parameters such as Clinical Etiology-Anatomy-Pathophysiology (CEAP), diameter of great saphenous vein, presenting primary symptoms, grading of primary symptom relief, change in disease severity and post-procedure symptoms were compared. The results were compiled and subjected for statistical analysis using Mann Whitney U test. P value less than 0.05 was set significant.

RESULTS

Table I: Patients distribution

Groups	Group I	Group II
Method	Ambulatory phlebectomies	Foam sclerotherapy
M:F	17:15	16:16

Group I comprised of 17 males and 15 females and group II had 16 males and 16 females (Table I).

Table II: Assessment of parameters

Parameters	Variables	Group I	Group II	P value
CEAP	C2–C3 legs	26	27	0.01
	C4–C6 legs	6	5	
GSV diameter (mm)		8.6	7.5	0.05
Procedure time (mins)		40.2	25.3	0.02
Primary symptoms	Pain	13	11	0.03
	Edema	5	3	
	Night cramps	8	5	
	Bleeding	2	7	
	Ulcer	6	4	
	Itching	7	3	
post-procedure symptoms	Transient skin pigmentation	1	3	0.05
	Superficial thrombophlebitis	0	2	
	Bleeding	1	3	
	Transient loss of sensation	0	1	
	Small ulcers	1	4	

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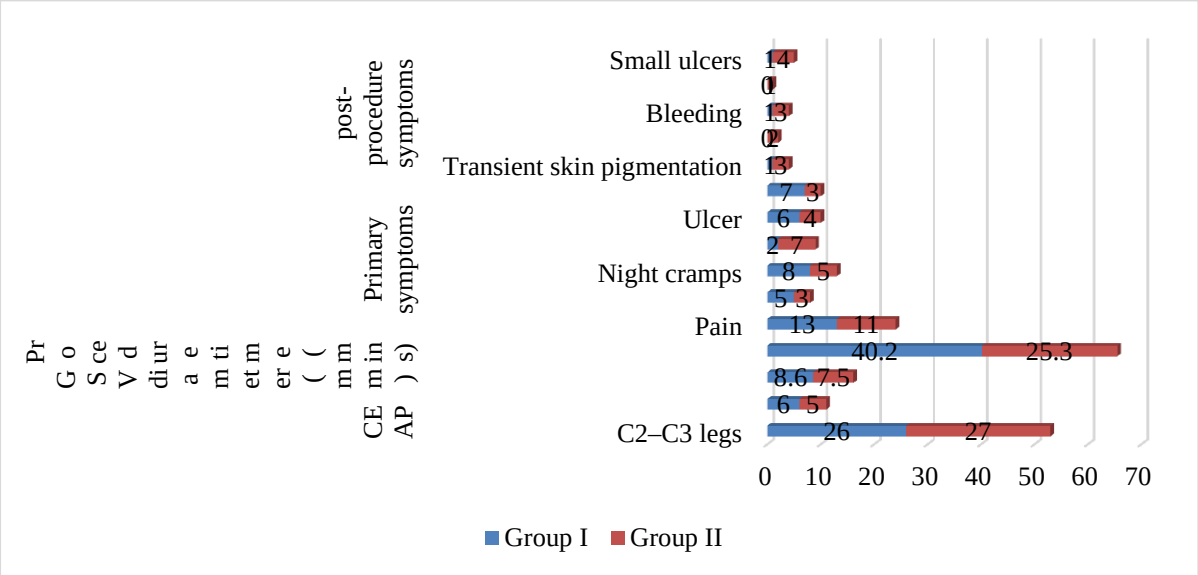

Graph I: Assessment of parameters

Table III: Grading of primary symptom relief

Variables	Group I	Group II	P value
Good improvement (+3)	85%	60%	0.01
Moderate improvement (+2)	10%	20%	
Mild improvement (+1)	5%	8%	
Unchanged (0)	0	7%	
Mild worsening (-1)	0	5%	
Moderate worsening (-2)	0	0	
Marked worsening (-3)	0	0	

Good improvement (+3) was seen in 85% and 60%, moderate improvement (+2) in 10% and 20%, mild improvement (+1) in 5% and 8%, unchanged (0) in 0 and 7% and mild worsening (-1) in 0 and 5% in group I and II respectively (Table III).

DISCUSSION

Perforators connect the superficial and deep venous system either directly to main veins or indirectly through the muscular and soleal venous plexus.[6] The emergence of minimally invasive techniques like ambulatory phlebectomy, foam sclerotherapy has led to increasing interest about the appropriate therapy for the treatment of isolated perforator incompetence. For the great majority of people varicose veins cause no symptoms and never cause harm.[7] Dislike of their appearance is a common complaint, particularly for women. Cosmetic concern may increase the emphasis that patients place on other symptoms. Varicose veins can cause a variety of symptoms of discomfort in the legs, but it is important to try to differentiate

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these from the many other reasons for leg pains.[8] We planned present study to compare ambulatory phlebectomy and compression sclerotherapy for varicose veins.

Group I comprised of 17 males and 15 females and group II had 16 males and 16 females. Mohammed et al[9] compared the clinical parameters (return to normal activity, primary symptom relief), functional parameters (procedure time, change in disease severity, course of venous ulcer), and duplex parameters (recurrence in treated veins, complete occlusion of treated veins) in the management of leg varicosities having isolated primary perforator incompetence by ambulatory phlebectomy and duplex guided foam sclerotherapy. Though the procedure time was shorter with FS than AP, the other parameters of primary symptom relief such as change in disease severity, faster healing of venous ulcer, complete occlusion of treated veins in follow-up duplex examination, and lower recurrence of treated veins are better with AP than FS.

Our results showed that parameters CEAP C2–C3 legs was seen in 26 and 27, C4–C6 legs was seen in 6 and 5, GSV diameter was 8.6 mm and 7.5 mm, The mean procedure time was 40.2 minutes and 25.3 minutes. Primary symptoms was pain in 13 and 11, oedema in 5 and 3, night cramps in 8 and 5, bleeding in 2 and 7, ulcer in 6 and 4 and itching in 7 and 3 in group I and II respectively. Roos et al[10] compared recurrence rates of varicose veins and complications after compression sclerotherapy and ambulatory phlebectomy. Patients were randomly allocated 49 legs to compression sclerotherapy and 49 legs to ambulatory phlebectomy. Eighty-two patients were included, of whom 16 were included with both of their legs. The number of treated legs was therefore 98, but two patients were lost to follow-up. One year recurrence amounted to 1 out of 48 for phlebectomy and 12 out of 48 for compression sclerotherapy; at 2 years, six additional recurrences were found, but then solely for compression sclerotherapy. Significant differences in complications occurring more in phlebectomy than in compression sclerotherapy therapy were blisters, teleangiectatic matting, scar formation, and bruising from bandaging.

We observed that post-procedure symptoms were transient skin pigmentation in 1 and 3, superficial thrombophlebitis in 0 and 2, bleeding in 1 and 3, transient loss of sensation in 0 and 1 and small ulcers in 1 and 4 in group I and II respectively. Good improvement (+3) was seen in 85% and 60%, moderate improvement (+2) in 10% and 20%, mild improvement (+1) in 5%and 8%, unchanged (0) in 0 and 7% and mild worsening (-1) in 0 and 5% in group I and II respectively. Zamboni et al[11] showed that the effectiveness of compression therapy is 96 and 68%, respectively, in patients with venous ulcers due to major superficial venous incompetence, and their results are comparable to minimal invasive procedures.

CONCLUSION

Ambulatory phlebectomy is an effective therapy for varicose veins of the leg. Primary symptom relief are significantly higher in ambulatory phlebectomy group.

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