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A comparative study of varicose vein surgeries (Trendelenberg versus RFA)

Hemachander S.

kumarsk5374@gmail.com

IRT Perundurai Medical College, Perundurai,
Tamil Nadu

Senthilkumar S.

smukunthpari@gmail.com

IRT Perundurai Medical College, Perundurai,
Tamil Nadu

ABSTRACT

To compare the results of TRENDLENBERG procedure and RADIOFREQUENCY ABLATION in the treatment of varicose veins in patients who presented to the department of general surgery IRT- Perundurai medical college in the past 30 months.

Keywords — RFA, Trendelenberg

1. INTRODUCTION

Varicose vein surgery is one of the commonest surgical procedure and is an important training operation for young surgeons. Varicose veins are dilated torturous veins of lower limb veins (great saphenous and short saphenous systems) with skin changes. A varicose vein is due to a vessel wall pathology or valvular pathology. It usually affects the people who work by standing for a long time.

Trendelenburg operation is juxta femoral flush ligation of saphenous veins and stripping of veins up to below the knee, followed by multiple phlebectomy for the below knee dilated veins.

Radiofrequency ablation is a minimally invasive procedure and has replaced the Trendelenberg technique and getting popular because of fewer complications. It is worked by thermal destruction of venous tissues using electrical energy passing through tissue in form of high-frequency alternating current.

Thus the need of study is to compare the trendelenburg and radiofrequency in terms of early ambulation, early return to work, the intensity of postoperative pain, recovery time and complications in the selected group.

2. MATERIALS AND METHODS

Between January 2016 to June 2018, over the period of 30 months, 100 patients presenting with varicose veins were studied. 58 patients were undergoing radiofrequency ablation and 42 patients undergoing Trendelenberg procedure in IRT, Perundurai medical college, Perundurai.

To emphasize the best form of treatment among the Trendelenberg and radiofrequency ablation in the age group of 18-70 years who are fit to undergo both the surgical procedures in terms of early ambulation, early return to work, the intensity of postoperative pain, recovery time and complications in the selected group.

Inclusion criteria: patient in the age group of 18-70 years who are healthy are included

Exclusion criteria: Following patients were excluded – obese, recurrent varicosities, post DVT.

Table 1: Results

	Trendelenberg	Radiofrequency ablation
Comfortable ambulation(1 st POD)	26/42	44/58
Hospitalization stay	4 days	2 days
Early return to work (2 weeks)	20/42	42/58

Table 2: Complications

Complications	Trendelenberg	RFA
Infection	6	2
haematoma	5	1
Skin colour changes	1	2
Nerve injury	1	0
Recurrence	1	3

Table 3: Early return to work

Day of return to work	Day 10	Day 15	Day 20	Day 25 and after
Trendelenberg	14	12	10	6
RFA	38	10	6	4

Table 4: Average number of day's patient needed injectable analgesia

Number of days	POD 1	POD 2	Beyond POD 5
Trendelenberg	6	20	16
RFA	32	22	4

Table 5: Duration of hospital days

Days of discharge	D 2	D 4	D 6	Beyond D 8
Trendelenberg	0	16	20	6
RFA	32	20	5	1

3. RESULTS

In our study, 42 patients underwent TRENDELENBERG and 58 patients underwent RADIOFREQUENCY ABLATION 44 out of 58 who underwent Radiofrequency ablation were able to ambulate freely in the first POD, whereas only 26 out of 42 patients were able to do so in a trendelenberg group.

Similarly, average hospital stay in the RFA group is 2 days which is significantly lower when compared to the Trendelenberg group (4 days).

The most striking advantage with the RFA group is in regard to the EARLY RETURN TO WORK. About 76 % of the patients in the RFA were able to return to their work force by the end of 2 weeks, whereas 47 % were able to return to their work in the same period.

Analgesia required for RFA patients was strikingly low compared to trendelenburg.

In view of complications, infection was observed in 6 patients in Trendelenberg whereas only 2 patients in the RFA group.

In terms of hospital stay, 55 % were discharged on Day 2, whereas none of the patients were discharged in trendelenberg operation.

4. CONCLUSION

Thus we emphasize that RFA technique is safe operative procedure and it provides obvious advantages over Trendelenberg in terms of early ambulation, early return to work, less intensity of post operative pain, rapid recovery time and low complications, so RADIOFREQUENCY ABLATION should be considered as the initial choice of surgery for patients presenting with varicose veins of lower limbs.