

Study of Safety and Effectiveness of Traditional Surgery Along With Conservative Interventions in the Treatment of Varicose Veins

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Abstract:

Background and Objectives: To assess the safety and effectiveness of traditional surgery with conservative interventions in the treatment of varicose veins.

Methods - a consecutive series of 31 patients (35 limbs) who came to surgical opd with a provisional diagnosis of primary varicose veins was taken up for traditional surgery (long saphenous vein stripping with or without, short saphenous vein stripping, along with surgery for incompetent perforators) with conservative interventions.

Results: in our study men were affected more than women, none of the patients had any major post-operative complications, minor complications occurred in 37% of cases. After 2 year follow up none of them had any recurrences.

Conclusions: traditional surgery along with conservative interventions is still safe, effective and economical, when done by or under surgeons experienced in varicose veins surgery. Further Postoperative conservative interventions might help in prevention of recurrences,

Key words: varicose veins, saphenous vein, surgical management, postoperative complications.

I. Introduction

Varicose veins are the subcutaneous veins which appears tortuous and bulging ; often easily visible and palpable it is most commonly found in legs, But may be seen in vulva, spermatic cords (varicoceles), rectum (hemorrhoids) and esophagus (esophageal varices)^[1]. Various old and new modalities of treatment exists for treatment of lower limb varicose veins , our study is aimed to know the safety and effectiveness of traditional surgery along with some conservative interventions in the treatment of varicose veins of lower limbs.

II. Materials And Methods

All patients admitted to surgical out patient of sree Siddhartha medical college hospital and research centre with provisional diagnosis of varicose veins from July 2008 to July 2010 were taken up for study , exclusion criteria was patients with secondary varicose veins , recurrent varicose veins and patient with co-existing arterial disease management of cases depended upon the individual presentation . when complications like edema, eczema and ulcer were present , patients were not immediately taken up for surgery rather they were given conservative interventions like anti edema measures like elevation of the limb (30 to 45 degrees), antibiotics if infected (according to culture -sensitivity). Once these complications were controlled patients were taken up for definitive procedure with traditional surgery. post surgery all patients under went conservative interventions which included lifestyle modifications like avoidance of standing for long durations /a change of occupation was advised , supportive stockings as recommended by Lam Eyt al.^[2] (wearing a 20 to 30 mm Hg elastic compression stockings with a gradient of decreasing pressure)were given at the time of discharge to all patients which was mostly thigh length stockings(few patients who were not comfortable with thigh length were changed to below knee stockings) and weight loss was advised for obese patients

Traditional surgery involved flush ligation [ligation at sapheno-femoral junction (sfj)] and stripping of the great saphenous vein (gsv) from the groin to just below the knee, or ligation at the sapheno popliteal junction (spj) and the stripping of the short saphenous vein (ssv) from the knee to the mid calf when ssv incompetent . Stripping of gsv involved insertion of a stripper into the saphenous vein through groin incision exiting at below knee incision followed by slow withdrawal of the stripper after ligating the vein over the stripper on the distal end with the olive attached . Incompetent perforators were managed by multiple stab avulsions. Non-healing ulcers were treated with split skin grafting.

surgeries were done by different surgeons all experienced for more than 3 years in varicose vein surgery, few of the surgeries which were done by residents in surgical department were done under direct supervision of these experienced surgeons.

III. Results

A total 31 number of patients (35 limbs) with primary varicose veins admitted in surgical ward of Sri Siddhartha medical college hospital, tumkur, and following findings were noted and analysed.

Sex Distribution

The Indian male appear to be more prone to the development of varicosity of veins of lower limb than the females

Table - 1 :Sex Distribution

No. of Cases Studied	No. of Cases	Percentage
Males	27	87.09
Females	04	12.9

The Age Distribution

Mostly patient affected were in the age group between 20 - 40 years. This group includes 64% of the cases. The youngest patient is at the age of 20 years and the oldest at 65 years.

Table 2 : Age Distribution

Age (Years)	Number of Patients	Percentage
10 -20	2	6.45
21-30	11	35.4
31-40	9	29.03
41-50	5	16.12
51-60	3	9.6
61-70	1	3.22

Table - 3 : Family History of Varicose Vein

Varicose Vein	No. of Cases	Percentage
Present	10	32.2%
Absent	21	67.7%

Table - 4: Clinical Manifestations

Symptoms	Present Series	
	No. of limbs	Percentage
Pain and prominent veins	26	77.14
Prominent veins and edema	3	8.5
Pigmentation and itching	1	2.8
(Pigmentation, veins and ulcer	5	14.28
Previous history of DVT	-	-

Table - 5: Clinical Class of CEAP

Class	Limbs	Percentage
0	-	-
1	-	-
2	26	74.2
3	3	8.5
4	1	2.8
5	-	-
6	5	14.28

Table - 6: Limb Involvement

Limbs	Number of Patients	%
Right	10	32.2
Left	17	54.8
Both	04	11.4

Table - 7: Venous system involved

System Involved	Limbs	%
Long saphenous vein	30	96.77
Short saphenous vein	0	0
Both	1	3.22
Perforator	28	90.32

Table - 8: Surgical Procedures Performed

Surgical Procedures	Limb	Percentage
SFFL + STRP	02	5.71
SFFL + STRP + MSA	28	80.0
SFFL + STRP + MSA + SG	5	14.28
SPL + MSA + SG	-	-
SFL + MSA	-	-
SPL + MSA	0	0

SFFL- Saphenofemoral flush ligation SFL - Subfascial ligation SPL - Saphenopoplitealligation STRP - Stripping; MSA - Multiple stab avulsion ; SG - Skin grafting

Table -9: Complications

Complications	Number of patients	Percentage
Wound infection	10	32.2
Haematoma	3	9.6
Saphenous neuritis	0	0
Residual varicosity	0	0
Femoral vein injury	0	0
Femoral Artery injury	0	0
Deep vein thrombosis	0	0
Pulmonary embolism	0	0

Complications- in our patients 10 patients developed minor wound infections, while three patients developed small hematoma at the site where incision was made to approach the sapheno-femoral junction, in all cases infection settled with daily dressings and antibiotics, 5 patients needed secondary suturing after infection subsided while hematoma was evacuated and resulting wound was secondarily sutured. All patients were discharged on post operative day (pod) 2 , but for 13 patients with complications hospital stay was extended by 5-7 days more.

IV. Discussion

The prevalence of venous disease is not related to the social class^[3] but most of our male patients were from labour class (68.5%), this probably because our hospital gave medical services at a concessional rate for the economically weaker section of society , the clinical presentation of varicose veins varies with each patient^[4], in our study patients mostly presented with dragging pain while walking or working, few of them had presented with active ulcers over the lower third of legs (Table-4&5)

Some well established risk factors for varicose veins include chronic cough, constipation, family history of venous disease, female sex, obesity , occupations associated with orthostasis, older age group, pregnancy and prolonged standing^[5], in our case which consisted of predominantly male who were affected , most of them were laboureres , working for long hours in erect posture, while all the females in our study were home makers, who also gave history of standing long hours at home , A total of 76% of our patients had risk factor of standing long duration while 32.2% of our cases had a family history of varicose veins.

Among the limb affected , in our case mostly it affected the left lower limb (54.8 %) , similar in comparison with myers k et al study^[6]

In a study conducted by Critchley G et al.^[7]mean age was 49.3 years (range 16-82 yrs.)^[7]even in our study most commonly affected age group was 20-65 years. In a study conducted by Bountouroglou DG et al.^[8]age range was between 20-76 years , while in that of Campbell WB et al.^[9] age range was 18-85 years, in all series it affected mostly young or the working population.

In retrospective study conducted by Critchley G et al ^[7].overall incidence of major complications was 0.8% while minor complications occurred in 17% of patients, among major complications DVT was noted in 0.5% of cases , one case each of pulmonary embolism, foot drop and one vascular injury (done to common femoral which could be later repaired),

Hagemuller^[10] has reported a 0.02% incidence of arterial injury after varicose veins surgery in Federal republic of Germany annually.

In study by Critchley G et al. minor complications included wound complications (hematoma, cellulitis/abscess) , which occurred in 2.8% of limbs and minor neurological disturbances like numbness / tingling in 6.6% of cases.

In a study by Milone M et.al^[11] saphenectomy even in elderly patients aged more than 65 years was found to be safe and efficacious, with slightly higher rate of complications in elderly compared to the younger population in their study.

In our study there were absolutely no major complications , but minor complications like wound infection, hematoma occurred (Table-9)

V. Conclusion

Since no standard protocol exist for the treatment of varicose veins; untill a long term randomised comparison of the different newer treatments which are presently available for varicose vein treatment like sclerotherapy , Radiofrequency and laser ablation etc. proving them to be equally effective in comparison with traditional surgery, we would suggest the traditional surgery for the treatment of varicose veins which is not much of a burden on the patient or the nation's economy and with minimal complications if done by an experienced varicose vein surgeon or under their guidance.

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