

Comparative study for treatment of great saphenous varicose vein by stripping versus multiple ligations

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Abstract

Background: Varicose veins are a routinely encountered in routine surgical practice. Their presentation varies from pure cosmetic, symptomatic to active ulceration. Improved socioeconomic status in modern society have resulted more patients with Varicose veins presenting with cosmetic concerns and mild symptoms. These patients were previously overlooked in busy peripheral surgical units. **Material and Method:** Patients presenting with Varicose Vein to a surgical OPD at National Institute of Medical Science and Research, Jaipur from 1st July 2015 to 31st July 2016 were analyzed. Clinical presentations were staged accordingly. Cases were randomly divided into two groups: Group A (Multiple Ligation) and Group B (GSV Stripping). **Results:** Fifty patients with Varicose Vein were studied. We included all patients between 25 to 50 years of age. Males are predominantly affected in our study accounting for 70% as compared to females (30%). Patients presenting with dilated veins had a 100% chance of being free of dilated veins after stripping of the long saphenous vein and Similar results were obtained by Subfacial Multiple ligation of perforators without long saphenous vein stripping. Thus, cosmetic results of long saphenous vein stripping were excellent in our study. **Conclusions:** Majority of the study group presented with early varicose veins disease. Even in a peripheral setting there is increased awareness and early health seeking pattern for Varicose vein. In our study it is concluded that stripping of Great saphenous vein is an effective treatment method as compared with Multiple Ligation in comparison to post operative recovery and cosmetic results.


Key Words: great saphenous varicose vein.

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INTRODUCTION

Varicose veins of the lower limbs are dilated, tortuous, and palpable veins that are typically larger than 3 mm.^{1,2} Varicosities are manifestations of chronic venous disease (CVD), which includes various other venous abnormalities, such as dilated intradermal veins, spider veins, reticular veins, and telangiectasia.³ Although varicose veins have long been thought to be a simple cosmetic nuisance, they can actually be the source of

more serious complications, including pain and discomfort that can lead to missed work days, a lower quality of life, and even the loss of a limb or life.⁴ Varicose veins affect 15-20 percent of the population¹ and about 2% have skin changes which may precede venous ulceration^{1,2}. Besides heredity, the other factors predisposing to varicose veins are pregnancy, prolonged standing, obesity, old age and heavy exercise^{3,4,5}. The overall accuracy of various clinical tests in localization of the problem is 60-70%⁶. Hence duplex ultrasonography should be done in all patients for proper evaluation. Surgery is still the best and reliable therapeutic option for treatment of varicose veins. High ligation, stripping and excision/ligation of varicose veins (shortly known as stripping surgery) is a procedure that was introduced at the turn of 19th to 20th century by three American surgeons^{7,8,9}. Reported rates of recurrence of the disease after treatment of superficial varicose veins range from 7-65 percent^{10,11}. Numerous studies have attempted to identify reasons for high recurrence rates of varicose veins and the most common causes cited are:

inadequate flush ligation of saphenofemoral junction, failure to identify saphenopopliteal reflux and mid-thigh perforating veins. It has been reported that stripping produces a better immediate result and lower long-term recurrence rate^{12,13,14}. Stripping of long saphenous vein only in the thigh reduces the incidence of nerve injury and reduces the incidence of recurrence by ensuring the avulsion of potential perforating veins (mid-thigh and tibial tubercle perforating veins.). Therefore, it was intended to undertake a study to compare long saphenous vein stripping from groin to knee and high saphenofemoral junction ligation in the treatment of varicose veins with saphenofemoral incompetence.

OBJECTIVES

1. To study the clinical signs/symptoms of lower limb varicose veins.
2. To compare the overall result regarding pain cosmetic result, wound infection, haematoma after surgery by stripping and multiple ligation.

MATERIAL AND METHODS

Source of Data: In our study clinical materials consists of all the patients admitted in dept of general surgery at National Institute of Medical Science And Research, Jaipur.

Sample Size: Total of 50 cases admitted and treated surgically during the period of July 2015 to July 2016 were opted for study.

Collection of data: All the patients presented with clinical manifestations of varicose vein of lower limb which fulfilling our inclusion criteria and fit for surgery were included in the study.

Inclusion Criteria: Patients with dilated veins, pain during walking, oedema, ulceration and patients with cosmetic concern.

Exclusion Criteria: The patients treated as outpatient and patient with other cause of varicose veins like deep vein thrombosis and other causes of venous obstruction like abdominal masses and pregnancy. Our study consist of 50 patients who were included under inclusion criteria. Diagnosis of varicose veins was made on clinical basis by taking thorough history and clinical examination. After doing routine laboratory investigations, colour duplex sonography was done in all the patients of a frequency of 5-12 MHz, to find out and localize incompetent valves and perforators in the leg. The cases were randomly divided in two groups: Group-A and Group-B alternately. Informed consent for inclusion in the particular group of study was taken from all the patients. Group-A patients were treated multiple ligation of perforators and while Group-B patients were treated with ligation of saphenofemoral junction along with stripping of long

saphenous vein from groin to knee. Both groups were studied for:

- Incidence of bleeding, haematoma, pain, wound infection, saphenous nerve injury in the postoperative period and hospital stay.
- Relief in symptoms of the patient.
- Cosmetic results were judged by the patients as excellent, moderate or poor.

Excellent: No visible or palpable varicose veins.

Moderate: Visible or palpable varicose veins less than 5mm in diameter.

Poor: varicose vein with a diameter of more than 5mm or visible incompetent main trunks. The results obtained were tabulated, analysed and a conclusion was drawn.

RESULTS

Table 1: Comparison of symptomatic relief in group A and group B patients

Symptoms	Follow UP					
	2 Week		3 Months		6 Months	
	GP-A	GP-B	GP-A	GP-B	GP-A	GP-B
Dilated Veins	0(0%)	0(0%)	0	0	0	0
Pain during Walking		2(8%)	5(20%)	0	0	0
Ulceration	0	0	0	0	0	0
Oedema	1(4%)	4(16%)	0	0	0	0
pigmentation	0	0	0	0	0	0

*total no.of patients(percentage)

Table 2: Clinical manifestations in present study (ceap-classification)

CLASS	Clinical Manifestations	Present study
0	No visible or palpable signs of varicose veins	0 (0%)
1	Telangiectasias	15(30%)
2	Dilated Veins	20(40%)
3	Pain and oedema	10 (20%)
4	Pigmentation	0 (0%)
5	Skin changes with healed Ulcer	3 (6%)
6	Ulceration	2 (4%)

In our study of 50 patients of varicose veins were treated for symptomatic disease with Multiple Ligation(25 cases) and Stripping of Great Saphenous Vein (25 cases). Patients who presenting with dilated veins as a main complaint were completely relieved of varicosities on the 14th postoperative day at the time of suture removal irrespective of the procedure done on them. We included all patients between 25 to 50 years of age. The mean age was 32.24 years and 42.12 years for Multiple ligation and Stripping of Great saphenous vein, respectively. Males are predominantly affected in our study accounting for 70% as compared to females (30%).Patients presenting with dilated veins had a 100% chance of being free of dilated veins after stripping of the long saphenous vein

and Similar results were obtained by Multiple ligation of perforators without long saphenous vein stripping. Thus, cosmetic results of long saphenous vein stripping were excellent in our study. In the present study also there was mild significant difference in both the groups till 2 week of post operative day but on follow up after 3 months and 6 respectively there was no significant difference in both the groups of patients in relation to pain during walking. In our study it was observed that ulcer healing was quicker after Great saphenous vein stripping in comparison to Multiple ligation of perforators. But there was no pigmentation even at 2nd week of follow up in both the groups. In our study it is observed that there was mild significant difference in relation to oedema after 2nd week of follow up.

Table 3: Results obtained after surgery in group a and group b, cosmetically

Cosmetic Results	Group- A	Group- B
Poor	02(8%)	0(0%)
Moderate	08(32%)	0(0%)
Excellent	15(60%)	25(100%)

Table 4: Percentage of complications in present study

Complication	Multiple Ligation	GSV Stripping
Paraesthesia	5(10%)	3(6%)
Haematoma/Bruising	4(8%)	6(12%)
Infection	10(20%)	1(2%)

CONCLUSION

It is concluded from the present study that varicose veins with saphenofemoral incompetence should be treated by high ligation of the saphenofemoral junction with long saphenous vein stripping from as this is associated with a lower recurrence rate as compared to multiple ligation of varicosities. There is no high incidence of complications

in the stripping group. Therefore, stripping of long saphenous vein from groin to ankle should be done in patients of saphenofemoral junction incompetence.

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