

Management And Clinical Outcome In Varicose Veins

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Abstracts: Background & objectives: Varicose veins and their associated symptoms and complications constitute the most common chronic vascular disorders leading to surgical treatment. The objectives of the study are analysis of the clinical features of varicose vein and to know the various treatment modalities adapted for the management of varicose veins. **Methods:** A prospective follow up was undertaken for 25 patients who were admitted for various symptoms of varicose veins. They were subjected to detailed history taking and examination with relevant investigations including Doppler venous study and were subjected to surgery. They were followed up for at least 6-month period to assess long-term morbidity, late complications.

Results and Interpretation: In our study, maximum number of patients 8 (32%) were presented in the 31-40 years age group. In our study, in 13 (52%) cases, right lower limb was involved and in 10 (40%) cases left lower limb was involved and in 8 (8%) both limbs were involved. In the present study, the commonest symptom in 24 (96%) cases was that of dilated and tortuous veins. 13 (52%) cases had complaints of pain in the affected limb and 5(20%) cases had limb edema, venous ulcer was present in 18 (72%) of cases. Most patients were subjected to operative management. **Conclusion:** The outcome of cases of primary varicose veins depends on a thorough and complete clinical examination and duplex scan by experienced radiologists. Operative line of treatment is a primary procedure in the management of varicose veins of lower limbs. [Andharia H NJIRM 2014; 5(1) : 46-49]

Key Words: Varicose, Pampaniform, Perforator Incompetence, Sclerotherapy, Subfascial Ligation

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Introduction Varicose veins and their associated symptoms and complications constitute the most common chronic vascular disorders leading to surgical treatment. The term varicose is derived from the Latin word meaning dilated. The definition of varicose veins varies widely ranging from “clearly visible, dilated, tortuous and possibly prominent subcutaneous veins of lower extremities” according to Arnoldi¹, to “varicose veins secondary to loss of valvular efficiency” according to Dodd and Cockett² Though varicose veins were recognized pre historically, only in the present century considerable knowledge has been gained concerning the anatomy of venous system of the leg, the physiological mechanism of venous return to heart against gravity and pathology of the disorder, which has led to many newer modalities of treatment.

The term “varicosity” is generally applied to elongated, tortuous, pouched, thickened, inelastic and friable vessels which have permanently lost its valvular efficiency though similar changes may also occur in veins in the anal canal, as haemorrhoids, varicocele of pampaniform plexus, and in cases of portal hypertension at the lower end of oesophagus.

Material and Methods: This was a prospective study with irb permission, involving consecutive 25 patients who presented with symptoms of primary varicose veins to V.S. General Hospital attached to Smt. N.H.L. Municipal Medical College, Ahmedabad. All patients who presented to our outpatient department with symptoms of primary varicose veins were meticulously examined and later subjected to Color Doppler studies before they underwent surgery for the same.

1. Clinical examination : After obtaining an adequate history, the patient was examined in standing position with good illumination, exposing both the lower limbs completely. The following tests were performed.

- Brodientrendelunburg I and II
- Modified Parthe's test
- Multiple tourniquet test
- Schwartz test
- Morrissey's cough impulse test.
- Fegan's test.
- Abdominal and rectal examination

The results of the tests were documented according to the clinical proforma.

2. Color Doppler ultrasonography: We used the Siemens ultrasonography machine. Using a 10 MHz probe, the patient was examined in standing position along the whole length of the long saphenous and short saphenous systems.

The following signs were specifically looked for:

1. Saphenofemoral junction incompetence
2. Saphenopopliteal junction incompetence
3. Perforator incompetence
4. Deep venous system
5. Presence of abnormal or unnamed veins or perforators

The sites of incompetence were marked by indelible skin pencil.

3. Intraoperative findings: The following operative procedure were undertaken –

- High, flush ligation of saphenofemoral junction with or without stripping of long saphenous vein.
- High, flush ligation of saphenopopliteal junction without stripping of short saphenous vein.
- Incompetent perforator vein ligation.

The intra-operative results were documented in the proforma.

FOLLOW-UP

All patients were discharged after 4 to 18 days with mean 7 days after surgery with elastic crape bandage. They were all followed up for a minimum of 6 months after they were discharged for:

- Symptomatic relief
- Recurrence of varicosity
- Healing of varicose ulcers.

Result: The results were noted down in tables. Table 1 shows age distribution, table 2 shows symptomatology, table 3 shows various sites of perforator incompetence and table 4 shows treatment given.

Table 1: Age Distribution

Age	AGE DISTRIBUTION	
	No. of Cases	Percentage
10 to 20	5	20
21 to 30	6	24
31 to 40	8	32
41 to 50	5	20
>60	1	4

Ages of the patient range from 17 to 70 years. Most common age group was 31 to 40 years(32%).

Table: 2 Symptomatology

Symptoms	No. Of Cases	Percentage
Dilated Veins	24	96
Limb Oedema	5	20
Ulcer	18	72
Pain	13	52
Others	5	20

Our patients presented with varied symptoms of which dilated veins(96%) were the commonest symptoms.

Table:3 Perforator Incompetence

Perforator Incompetence			
Findings	Clinical	Doppler	Intra-operative
Thigh	5	6	4
Below Knee	15	16	14
Above Ankle	17	18	18
Other	3	4	3
Total	40	44	39

Above ankle perforator was the commonest perforator to be incompetent clinically(17), radiologically(18) as well as intra-operatively(18).

Table: 4 Treatment Given

Treatment	No.of Cases	Percentage
SFJ Ligation with stripping of LSV	2	8
SFJ Ligation with stripping of LSV with incompetent perforator ligation	18	64
SFJ Ligation, SPJ Ligation with stripping of LSV with perforator ligation	2	8
Sclerotherapy with SFJ ligation	2	8
Sclerotherapy alone	1	4

SFJ ligation with stripping of LSV with incompetent perforator ligation(64%) was the commonest surgery performed.

Discussion: In our study, maximum number of patients 8 (32%) were presented in the 31-40 years age group. The next common age group of

presentation was 21-30 years with 6 (24%) patients. This age distribution correlates well with other studies conducted by W.B.Campbell et al³ who showed the commonest age at presentation to be 30-40 yrs.

Out of the 25 cases included in this study 21 cases (84%) were male with only 4 female patients (16%). This disparity may be due to the fact the patients are from the low socio-economic background and also cosmesis is not a concern, as these patients do not wear short clothes. Callum et al⁴ show women to be affected more than men. In our study, in 13 (52%) cases, right lower limb was involved and in 10 (40%) cases left lower limb was involved and in 8 (8%) both limbs were involved.

In the present study, the commonest symptom in 24 (96%) cases was that of dilated and tortuous veins. 13 (52%) cases had complaints of pain in the affected limb and 5(20%) cases had limb edema, venous ulcer was present in 18 (72%) of cases. This findings correlate well with other studies done by W.B. Campbell et al³, with cosmetic symptoms being 90% with aching pain 57% being more common at this study.

In this series, long saphenous vein was involved in 92% of cases (23 patients), the short saphenous vein in 0% (0 patients) and both long and short in 8% (2 cases). Incompetent perforator was noted in 20 (80%) cases.

Doppler/Duplex scanning is the primary non-invasive method of assessing chronic venous insufficiency, which has an overall accuracy of 94%. This finding is in conformity of Masuda E M et al⁵ who showed that duplex scanning had an overall accuracy of 88%.

Eighteen patients had associated venous ulcers that were all due to superficial venous incompetence.

Conservative treatment was given to all the patients pre-operatively with the idea of improving the limb and making it fit for surgery and post-operative compression treatment was followed routinely to prevent haematoma formation after

stripping and were advised elastic crepe bandage/stockings for three to four months.

Sclerosant therapy was tried in this series, intra-operatively as well as a sole modality of treatment. Paucity of sclerosant treatment use was because of presence of major incompetence.

Out of 25 cases, saphenofemoral junction ligation including the ligation of anatomically constant tributaries at its termination with stripping of long saphenous vein by Myers stripper up to the knee and ligation of incompetent perforator was done in 18 cases. SFJ and SPJ ligation with stripping of LSV was done in 2 cases. SSV was not stripped to avoid nerve injury. Flush ligation of SFJ and stripping of LSV was done in 2 cases.

In our study, we encountered 9 cases of complication, the commonest being seroma (3 cases), which were subsided with drainage, and haematoma in 2 cases which cleared after about 15 days. There was no incidence of deep vein thrombosis or pulmonary embolism postoperatively in this series. Literature shows the incidence to be very low at 0.01%^{6,7}.

We had two recurrence of varicosity in our study with a follow up of a minimum of 6 months one of them was patient receiving sclerotherapy only. In a small series of this study, it is difficult to assess the results of operative treatment as such assessment should be taken up after a long follow up period of at least five years.

Conclusion: Varicosity of the lower limb is a fairly common clinical entity. The commonest age group of patients suffering from varicose veins is 31 to 40 years. The involvement of long saphenous system is more common. The outcome of cases of primary varicose veins depends on a thorough and complete clinical examination and duplex scan by experienced radiologists. Operative line of treatment is a primary procedure of choice.

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