

# Clinical Case Study ON Incidence and Management of Varicose Veins

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## ABSTRACT

Varicose veins are tortuous, widened veins in the subcutaneous tissues of the legs and are often easily visible. Their valves are usually incompetent so that reflux of blood occurs, and the resulting venous hypertension can cause symptoms. 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. However, they cause concern and distress on a large scale, most of which can be dealt with by good explanation and reassurance, or by a variety of treatments which are evolving rapidly at present. Patients can now be referred for more precise assessment and a greater range of therapeutic options than ever before. To study the various clinical presentations, complications of varicose veins and various modalities of management and outcome of various modalities of management.

**Key words:** Varicose veins, Venous hypertension, Concern, Distress

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## INTRODUCTION

The term varicose is derived from latin word varix meaning 'bent'. Varicose limb which has lost its valvular efficiency and as a product of the resultant venous hypertension in standing position becomes dilated, tortuous, elongated, and thickened. Varicose veins are known from antiquity since Hippocrates and treatment in its length and associated with varicose ulcer. Varicose veins of the lower limb are the most common vascular disorder affecting the human beings [1]. It is almost certainly the price we pay for the erect posture. Nowadays we have various options are available for treating varicose veins. Our renewed interest in the incidence and management of varicose veins has prompted a reappraisal of its basic components and how they are individually affected by biological, mechanical, and physical forces [2,3]. The goal of varicose veins management is safe and easy manipulation of the healing process we are closer to that goal than ever before.

## MATERIALS AND METHODS

This is a prospective clinical study of 100 cases of varicose veins and to assess the management and outcomes, during the period from March 2017 to October 2018 in our Department of General Surgery, Sree Balaji Medical College and Hospital.

All the cases underwent detailed evaluation regarding presenting symptoms, duration, and previous modality of treatment. Clinical examination was made as to which system was involved and to identify which superficial valves and perforators were incompetent. Deep vein patency was assessed. Abdominal and pelvic examinations were made to rule out secondary causes. Cardiovascular and peripheral pulses were assessed to exclude arterial disease.

Routine investigations and selective doppler assessment were done. Documentation was done using a stratified proforma which included demographic data of the patients studied; all the details of investigations carried out and the types of management provided to the patients enrolled in the study.

For all patients, haematological, biochemical, microbiological, and radiological investigations were carried out as enumerated in the proforma using standard procedures.

## Inclusion criteria

All cases of varicose veins including Outpatients and inpatients in SBMCH between the period from MARCH 2017-OCTOBER 2018.

## Exclusion criteria

All the patients with Varicose veins leaving the hospital before the treatment is complete.

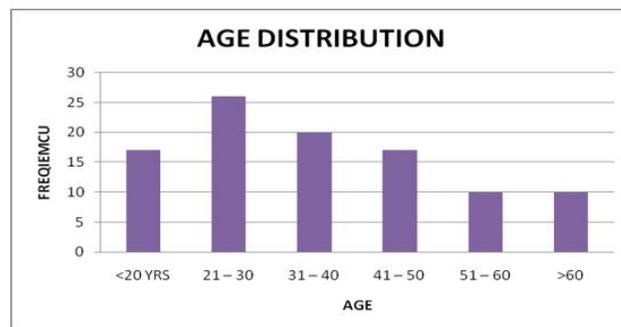
**RESULTS**

Among the study population, a majority of 26 % constituted between the age group 21-30 years followed by 20% between the age group 31-40 years, 17% between the age group 41- 50 years and less than 20

years, 10 % between the age group 51-60 & above 60 years (Table 1 and Figure 1). The study population was distributed as 62 % of males and 38 % as females (Table 2 and Figure 2).

**Table 1: Age distribution of the patients.**

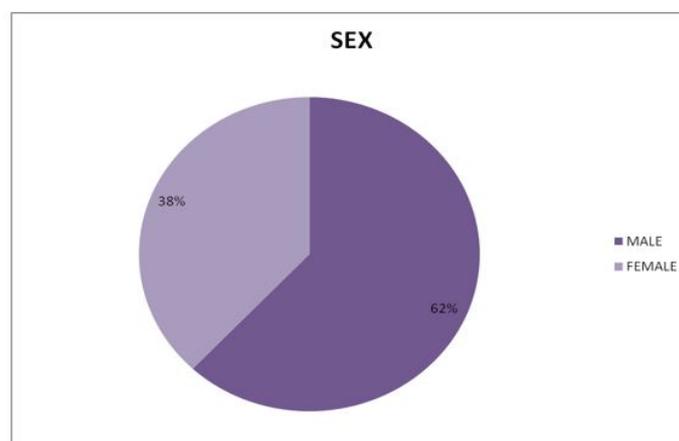
Age	No of cases	Percentage
<20 YRS	17	17
21 - 30	26	26
31 - 40	20	20
41 - 50	17	17
51 - 60	10	10
>60	10	10
Total	100	100



**Figure 1: Age distribution of the patients.**

**Table 2: Gender distribution.**

Sex	No of cases	Percentage
Male	62	62
Female	38	38
Total	100	100



**Figure 2: Gender distribution.**

Most of the people presented with symptoms persists more than 2 years before they sought the medical attention.12% presented with in six months duration and another 21% took for about at least 2 yrs. to medical consultation. Those who took 2 -5 yrs. constituted 28% those who took more than 5 yrs. constituted 13%. Time duration for the presentation between 3 months minimum and 20 years maximum (Table 3).

**Table 3: Mean duration of presentation.**

Presentation	No of cases	Percentage
<6 months	12	12
6 months- 2 yrs	21	21
2 yrs- 5 yrs	28	28
5 yrs - 8 yrs	13	13
8 yrs - 10 yrs	14	14
>10 yrs	12	12
Total	100	100

Manual labourer formed the largest proportion around 16%. Pregnant women and doctors formed 10% each. Those who stood for prolonged periods constitute

students, salesmen, security & others which formed 64% (Table 4). Among the total women patients 26% (10 cases) were pregnant women (Table 5).

**Table 4: Various occupations of the patients.**

Occupation	No of cases	Percentage
Manual working	16	16
Pregnant women	10	10
Doctors	10	10
Students	14	14
Salesmen	14	14
Security	13	13
Others	23	23
Total	100	100

**Table 5: Ratio of pregnant women among the women patients.**

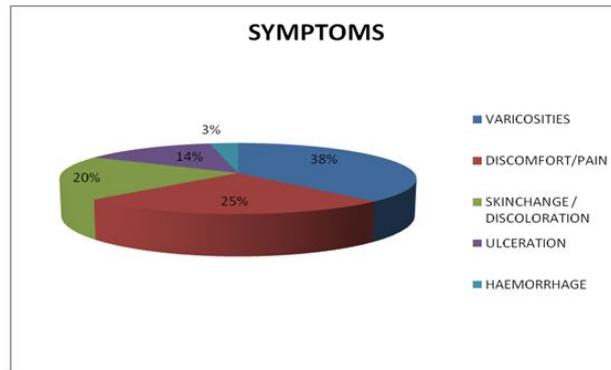
Women	No of cases
Pregnant women	10
Total women	38

38% of the study population had symptoms related primarily to the dilated varicose veins. 25% had discomfort or pain. Symptoms due to skin change and discolouration, ulceration and haemorrhage was

presented with 20%, 14% and 3% respectively (Table 6 and Figure 3).

**Table 6: Different symptoms at presentation.**

Symptom	No of cases	Percentage
Varicosities	38	38
Discomfort/pain	25	25
Skin change/discoloration	20	20
Ulceration	14	14
Hemorrhage	3	3
Total	100	100

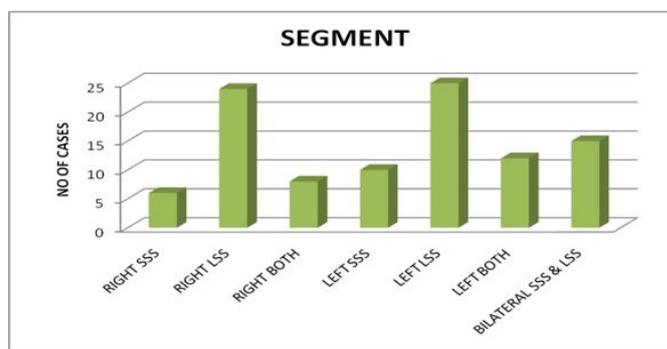


**Figure 3: Different symptoms at presentation.**

LSS was commonly involved around 49% and short saphenous around 16% while both in left and right constituted 8% and 12% respectively. Left sided lesions constituted 47% and right-sided lesions constituted only 38%. Bilateral made around 15% (Table 7 and Figure 4).

**Table 7: Modalities of segment involvement.**

Side	Segment	No of cases	Percentage
Right	SSS	6	6
	LSS	24	24
	Both	8	8
Left	SSS	10	10
	LSS	25	25
	Both	12	12
Bilateral	SSS & LSS	15	15
Total		100	100



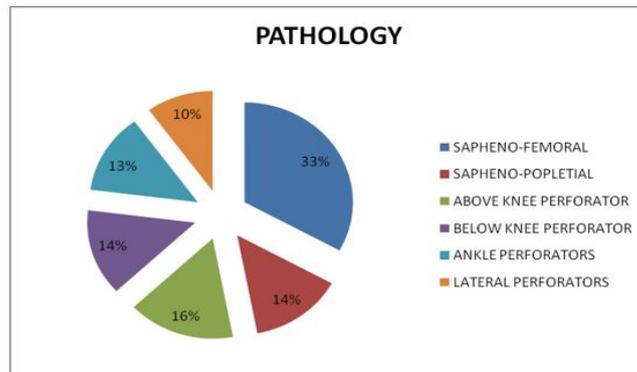
**Figure 4: Modalities of segment involvement.**

Sapheno-femoral incompetence constituted the bulk of the disease 33% of the present study. Sapheno-popliteal incompetence & below knee perforator incompetence occurred each in 14%. Above knee perforator incompetence occurred in 16%. Ankle perforators incompetence was least common only in 13%. Lateral perforator incompetence was common in 1% (Table 8 and Figure 5).

**Table 8: Different pathology of varicose veins.**

Pathology	No of cases	Percentage
Sapheno- femoral incompetence	33	33
Sapheno- popliteal incompetence	14	14
Above knee perforator	16	16
Below knee perforator	14	14

Ankle perforators	13	13
Lateral perforators	10	10
Total	100	100

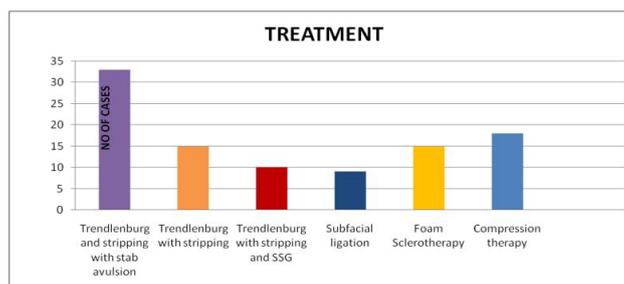


**Figure 5: Different pathology of varicose veins.**

Trendlenburg and stripping with stab avulsion constitutes 33%, trendlenburg and stripping with constitutes 15% whereas trendlenburg with stripping and SSG is done in 20%. Subfascial ligation procedure is done in 9%. Foam sclerotherapy and compression therapy is done in 15% and 18% respectively (Table 9 and Figure 6).

**Table 9: Different modality of treatment.**

Treatment	No of cases	Percentage
Trendlenburg and stripping with stab avulsion	33	33
Trendlenburg with stripping	15	15
Trendlenburg with stripping and SSG	10	10
Subfascial ligation	9	9
Foam Sclerotherapy	15	15
Compression therapy	18	18
Total	100	100



**Figure 6: Different modality of treatment.**

Among the total cases 23 % had hyperpigmentation, 20 % had eczema, 31 % had Lipodermatosclerosis, 19 % had venous ulcer and 7 % had haemorrhage (Table 10 and Figure 7). Among the 100 cases, 41 patients had complications out of which 34 % had seroma and 66% had recurrence (Table 11 and Figure 8).

**Table 10: Patients with complications of varicose vein.**

Complications	No of cases	Percentage
Hyperpigmentation	23	23
Eczema	20	20

Lipodermatosclerosis	31	31
Venous ulcer	19	19
Hemorrhage	7	7
Total	100	100

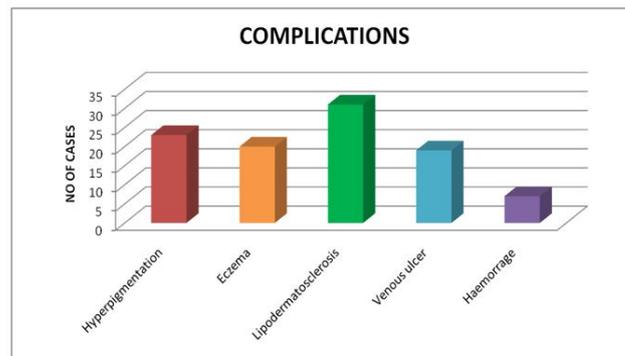


Figure 7: Patients with complications of varicose vein.

Table 11: Post-operative complications.

Complications	no of cases	Percentage
Seroma	14	34
Recurrence	27	66
Total	41	100

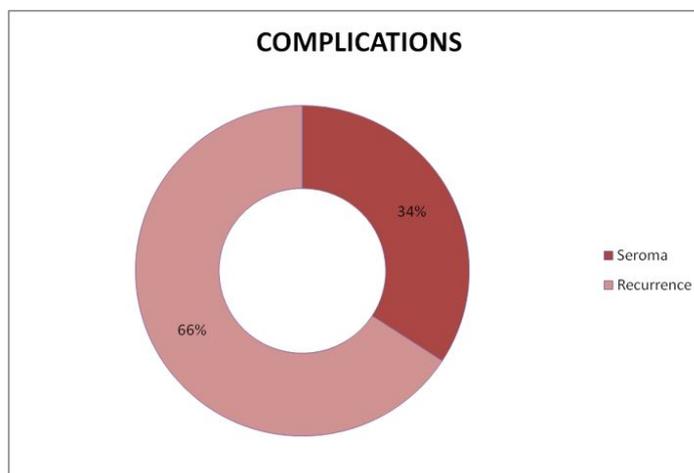
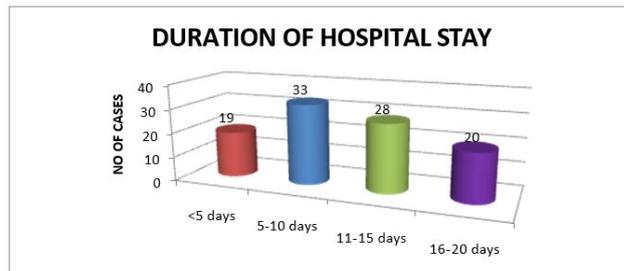


Figure 8: Post-operative complications.

33 % of the people stayed mean duration 5 -10 days in hospital. 28% people stayed for the duration about 11-15 days. 20% people stayed for the duration about 16-20 days in the hospital and 19 people stayed for less than 5 days in the hospital. Minimum 4 days maximum 19 days is duration of hospital stay for the patient (Table 12 and Figure 9).

Table 12: Duration of hospital stay.

Duration of hospital stay	No of cases	Percentage
<5 days	19	14
5-10 days	33	29
11- 15 days	28	28
16- 20 days	20	15
TOTAL	100	100



**Figure 9: Duration of hospital stay.**

## DISCUSSION

This study was conducted among 100 patients with varicose veins of Sree Balaji Medical College and Hospital between March 2017 and October 2018 for a period of 18 months. According to Evans CJ, Fowkes FGR, Male and female ratio constitutes for about 1:2, Males constitute 62 % of our study and females 38 %. Male:female ratio 1.6:1.7. The age group which affects predominately economically productive people between 20 to 40 yrs. Mean age of presentation is around 2 years. 12 patients less than six months and longest duration are more than 10 years. Varicose vein being a benign disorder hence people do not seek medical attention early except for haemorrhagic varicose veins. Manual worker constitutes 16% of our study. Occupations like manual labourer, salesman, farmers, security guards constitute around 50%. 38% of the people seek medical attention due to varicosities and one fourth of patient complaints discomfort or pain. Ulceration and haemorrhage were about 14 % and 3 % respectively. In my study Left sided lesions were more common than right side. Varicosities is the most common presenting symptom. Long saphenous segment is more common than short saphenous segment. Both systems were involved in 15% of people. Sapheno-femoral incompetence is the most observed pathology. Of the perforators below knee perforator is commonly involved and lateral perforator least. Trendlenburg procedure with stripping and stab avulsion with subfacial ligation of perforation was most done.

SSG combined with the above procedure was done in 10% of the patients. Lipodermatosclerosis was the common complication. Hyperpigmentation was seen in 23 % of patients. 19 % of the patients presented with venous ulcers. Eczema was seen in 10 % of patients and 5% of the patients presented with haemorrhage. Mean hospital stay was 11 days. Minimum stay in the hospital was 4 days and the maximum was 19 days [4-35].

## CONCLUSION

In my study Varicose veins was relatively common among the youth and middle age groups. Risk factors for the development of varicose veins were prolonged standing and multiparity. Clinical presentations ranged from mild to severe varicosities, with ulcer and Lipodermatosclerosis being the most severe forms. At present, Duplex ultrasound scanning is the most reliable investigative tool in making diagnosis of varicose veins in terms of valve incompetence along GSV and SSV, deep

vein thrombosis and perforator incompetence. Treatment includes conservative management, sclerotherapy, and surgery. Conservative management was advised in patients who are pregnant and patients with contra indications for surgery. These patients were advised to wear compression stockings. Sclerotherapy was advised in patients with reticular veins. Surgical procedure includes Trendlenburg procedure, stripping of the vein and sub facial ligation of the perforators. Surgical intervention has been revolutionized by the development of endovenous techniques like radiofrequency ablation, laser ablation, foam sclerotherapy and sub facial endoscopic perforator surgery.

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## ETHICAL APPROVAL

The study was approved by the Institutional Ethics Committee.

## CONFLICT OF INTEREST

The authors declare no conflict of interest.

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