

A PROSPECTIVE STUDY OF CLINICAL PROFILE AND MANAGEMENT OF VARICOSE VEINS IN A TERTIARY CARE HOSPITAL

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Abstract

Background: Varicose veins are a superficial vein of the lower limb that has permanently lost its valvular efficiency and has become dilated, tortuous, and thickened as a result of the resulting venous hypertension in the standing position. The disease is one of the most common surgical problems among low socioeconomic groups in India. The problem can have an economic impact because it can cause absenteeism at work and sometimes force them to change jobs. The purpose of this study was to investigate the clinical profile of varicose vein disease. The study examined the demographic pattern, clinical presentation, comorbidities, and treatment outcome. **Materials and Methods:** From March 2021 to February 2022, a prospective observational study was conducted. The clinical profile of varicose vein disease was studied in 100 patients in this study. According to the inclusion/exclusion criteria, all admitted patients with varicose vein disease were included in the study. A thorough clinical history was taken, and a full clinical examination was performed, with special emphasis on varicose veins and their complications. On a proforma, all details about the management of these patients, including specific investigations and operative procedures, were recorded. **Result:** There were 16 females and 84 males in the study, which shows a male preponderance. There was 12 patients {12%} in age group between 21-30 years. 22 patients were in the age group 31- 40 years. Maximum patients {30.8%} were from the age group between 41-50 years followed by the age group between 31 to 40 years. This denotes that most of the patients of varicose vein disease seek surgical treatment in their middle age. Hypertension {22%} and Diabetes Mellitus {24%} were the comorbidities seen in the 100 patients of this study. Out of the thirty-three operated patients 54{54%} had undergone ligation at saphenofemoral junction and stripping of the long saphenous vein. In 6 {6%} patients the sapheno popliteal junction was ligated and remaining six only the perforators were ligated. **Conclusion:** It is found that varicose vein disease with its associated sequelae brings the patient for treatment in our scenario. Long saphenous vein is the commonly affected part of the superficial venous system because of incompetency of the valve at SFJ. Although various etiological factors can be attributed to varicose vein disease but occupation and obesity remain the main factors. Accurate assessment of problem and adequate surgery will prevent recurrence.

INTRODUCTION

Varicose veins are a superficial vein of the lower limb that has permanently lost its valvular efficiency and has become dilated, tortuous, and thickened as a result of the resulting venous hypertension in the standing position.^[1] Varicose veins affect 23% of American adults, according to statistics. When

spider telangiectasis and reticular veins are included, the prevalence rises to 80% in males and 85% in females. Varicose vein disease is distinguished by dilated, elongated, and tortuous superficial veins of the lower limbs, which may allow blood to flow backwards due to faulty valves.^[2] The patient is concerned about the unsightly appearance of dilated tortuous veins in the early stages of the disease, but

if left untreated, the later stages are marked by itching due to dermatitis, swelling, and ulceration. The disease is one of the most common surgical problems among low socioeconomic groups in India.^[3]The patient is concerned about the unsightly appearance of dilated tortuous veins in the early stages of the disease, but if left untreated, the later stages are marked by itching due to dermatitis, swelling, and ulceration.^[4] The disease is one of the most common surgical problems among low socioeconomic groups in India. The problem can have an economic impact because it can cause absenteeism at work and sometimes force them to change jobs.^[5] The purpose of this study was to investigate the clinical profile of varicose vein disease. The study examined the demographic pattern, clinical presentation, comorbidities, and treatment outcome

MATERIALS AND METHODS

Study Design A prospective observational study
Study Location Department of General Surgery,

 Study duration: March 2021 to February 2022.

From March 2021 to February 2022, a prospective observational study was conducted. The clinical profile of varicose vein disease was studied in 100 patients in this study. According to the inclusion/exclusion criteria, all admitted patients with varicose vein disease were included in the study. A thorough clinical history was taken, and a full clinical examination was performed, with special emphasis on varicose veins and their complications. On a proforma, all details about the management of these patients, including specific investigations and operative procedures, were recorded. The data was entered on a master chart at the end of the study. The collected data was tabulated, and the descriptive statistical method was used to analyse it. The patient's identity was never revealed during the course of this study.

RESULTS

We included 120 patients with acute stroke in our study and all of them had venous Doppler done for lower limb venous system. Gender Distribution of Patients with stroke of the 120 patients enrolled in our study, 72% (n=86) were males and 28% (n=34) were females.

Table 1: Age distribution

Age group	Female (16)	Male (84)	Total (100)
	N (%)	N (%)	N (%)
<20 years	0 (0)	2 (2)	2 (2)
21-30 years	0 (0)	12 (12)	12 (12)
31-40 years	4 (4)	18 (18)	22 (22)
41-50 years	8 (8)	24 (24)	32 (32)
51-60 years	2 (2)	20 (20)	22 (22)
61-70 years	2 (2)	6 (6)	8 (8)
>71 years	0 (0)	2 (2)	2 (2)
Total	16	84	100

There were 16 females and 84 males in the study, which shows a male preponderance. There was 12 patients {12%} in age group between 21-30 years. 22 patients were in the age group 31- 40 years. Maximum patients {30.8%} were from the age group between 41-50 years followed by the age group between 31 to 40 years. This denotes that most of the patients of varicose vein disease seek surgical treatment in their middle age.

Table 2: Distribution of patients according to occupation

Occupation	Number of patients	Percentage
Farmer	40	40%
Construction work	16	16%
Laborer	12	12%
Coolie	10	10%
Housewife	8	8%
Shopkeeper	4	4%
Student	4	4%
Bus Conductor	2	2%
Daily wage worker	2	2%
Police trainee	2	2%
Total	100	100%

There were 40 {40%} farmers, 16{16%} construction workers, 24 labourers, 10 {10%} were coolies. Remaining twenty percent patients were doing sedentary jobs like being housewife, students and office work. This clearly indicates that individuals involved in hard physical work are more prone to get varicose vein disease and its complications.

Table 3: Distribution of patients according to limb involvement

Lower limb involvement	Number of patients	Percentage
Bilateral	40	40%

Unilateral	60	60%
Total	100	100%

The above table shows the distribution of patients according to lower limb involvement. There were 60 {60% } patients with unilateral lower limb involvement, whereas 40{40% } had bilateral lower limb involvement.

Table 4: Distribution of patients according to presenting complaints

Presenting complaints	Number of patients	Percentage
Dilated veins	90	90%
Skin Changes	70	70%
Dull Aching night pain	50	50%
Ulcer	42	42%
Edema	34	34%

90 {90% } presented with dilated veins, while 70 {70% } presented with skin changes. Dull aching night pain was a complaint in 50 patients. 42 {42% } presented with ulceration. Majority of patients presented with dilated veins and skin changes.

Table 5: Patients with comorbidities

Comorbidities	Number of patients	Percentage
Hypertension	22	22%
Diabetes mellitus type 2	24	24%

Hypertension {22% } and Diabetes Mellitus {24% } were the comorbidities seen in the 100 patients of this study

Table 6: Patients with previous limb surgery

Previous limb surgery	Number of patients	Percentage
Ligation of dilated veins left lower limb	2	2%
Stripping of varicose veins ligation at SFJ	4	4%
Total	6	6%

Table 7: Patients with previous deep vein thrombosis

Previous DVT	Number of patients	Percentage
No	97	97%
Yes	3	3%
Total	100	100%

Table 8: Distribution of patients according to doppler findings

Doppler findings	Number of patients	Percentage
SFJ incompetence	76	76%
SPJ incompetence	36	36%
Perforator incompetence	94	94%
Dilated tortuous GSV / SSV	84	84%
DVT	6	6%

Table 9: Distribution of patients according to surgeries performed

Surgery	Number of patients	Percentage
SFJ flush ligation with stripping of LSV	4	
SFJ flush ligation with stripping of LSV with perforator ligation	32	32%
SFJ, SPJ flush ligation with stripping of LSV with incompetent perforator ligation	18	18%
SPJ ligation with stripping of SSV with incompetent perforator ligation	2	2%
SPJ ligation with incompetent perforator ligation	4	4%
Perforator ligation	6	6%
Total	66	66%

Out of the thirty-three operated patients 54{54% } had undergone ligation at saphenofemoral junction and stripping of the long saphenous vein. In 6 {6% } patients the sapheno popliteal junction was ligated and remaining six only the perforators were ligated.

DISCUSSION

This study was planned with the aim to identify the various demographical, clinicopathological and occupation related factors in the causation of varicose vein disease in the population served by our center. Two-third of the patients in our study were from the age group between 21 to 50 years. If the patients between 51 to 60 years are added then it becomes almost 90%. In a study done by Mulla et al, mean age of the study population was 45.6 years with a range of 21 to 70 years.^[3] Gad et al. found 90% of patients in the age group between 20 to 56 years.^[4] This age group is the backbone of any society. They are the breadwinner of family and any disease in this age group can affect the welfare of family.^[6] Morbidity due to varicose veins disease can lead to absenteeism from work and financial losses. Associated morbidities such as diabetes and hypertension can further aggravate the problem. Diabetes Mellitus can be a detrimental actor in the outcome from surgical treatment of varicose veins in factory workers by Widmer et al., it was found that among the male and female factory workers, the incidence was higher in males.^[7] Secondly we believe that the female population in our society does not come with complaints of varicose veins of lower limb because the lower limbs are well covered in all ethnic dresses. Whereas the male population become aware of the varicose veins because of persistent pain in calves due to engorged veins, dermatitis, and varicose ulcers. In the western world the male and female ratio of varicose veins is equal.^[8] Abramson et al. conducted a study in Jerusalem which showed four times higher incidence of varicose veins in females. They attributed the higher incidence to obesity in these females as the major contributory factor in the causation of varicose veins.^[9] Our study had 29 {55.8%} patients with unilateral varicose veins, whereas 23 {44.2%} patients had bilateral involvement. Mishra et al. in a study of 60 patients, found 54 {90%} patients with unilateral

involvement, which is a similar finding to our study.^[10]

CONCLUSION

It is found that varicose vein disease with its associated sequelae brings the patient for treatment in our scenario. Long saphenous vein is the commonly affected part of the superficial venous system because of incompetency of the valve at SFJ. Although various etiological factors can be attributed to varicose vein disease but occupation and obesity remain the main factors. Accurate assessment of problem and adequate surgery will prevent recurrence.

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