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## Study on prevalence, demographic and clinical manifestations of lower limb varicose veins

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### Abstract

**Background:** Varicose veins are a common condition that the current paper elaborates the features of the condition in a local Indian population.

**Aim & Objective:** The main aim of the present study to evaluate the prevalence, demographics and clinical manifestations of lower limb varicose veins patients.

**Methodology:** We include 80 patients over a two year period all admitted patients to a Princess Esra Hospital, Shahali Banda, Hyderabad and Owasi Hospital and Research Centre, Kanchan Bagh, Hyderabad from period June 2017-June 2019.

**Results:** In the present study, most of the patients (93.4%) were in the 20-50 years age group. Out of 80 patients, 70 patients were studied in their occupation and continuously involved in working and prolonged standing showed muscular effect. We found that male (91.25%) patients were dominant than the female. The right limb was involved in 18 cases and the left limb in 61 cases. The most common symptom was pain with prominent veins which occurred alone or in combination with oedema, eczema, pigmentation or ulceration.

**Conclusion:** This study reveals that the disease is more prevalent during the active adult life in their 3rd and 4th decades and males were more affected. The occupations needing prolonged standing and use of violent muscular efforts is found to be a contributing or precipitating factor for varicose veins. The commonest symptoms in the study were prominent swellings in the lower limb and pain. Definite relationship exists between occupation involving prolonged standing and primary varicose veins. The involvement of long saphenous and communicating system is commonest followed by long saphenous involvement alone.

**Keywords:** Varicose veins, Lower limb, Clinical Manifestions, Pigmentation

### Introduction

Varicose veins are defined as dilated, tortuous, subcutaneous veins  $\geq 3$  mm in diameter measured in the upright position with demonstrable reflux <sup>[1]</sup>. Varicose veins do not threaten life and are seldom disabling, but it causes a considerable demand on medical care <sup>[2]</sup>. It is the cause of morbidity and loss of precious work hours and a significant financial burden on the health - care system. It is a penalty we pay for adoption of the erect posture. It affects 10–20% of population in the Western world but in India, it is 5% <sup>[3]</sup>.

There are several factors responsible for the development of varicose veins such as pregnancy, prolonged standing, obesity, old age, chronic rise in intra - abdominal pressure, and athletics. Heredity also plays an important role <sup>[4]</sup>.

The prevalence has been variously reported from as little as 2% to over 20% in population studies. This enormous variation results from the different populations studied, different definitions applied and the different assessment of examination techniques and Western studies have shown that 20% population suffers from varicose vein and 1% has skin changes proceeding to venous ulceration <sup>[5]</sup>.

The prevalence of webs or small reticular varicosities was even higher at over 80% for both males and females. Although it was previously believed that varicose veins are more common in women, few other population studies confirm that varicose veins are at least as common in men <sup>[6]</sup>. The prevalence of varicose veins rise with age in virtually all published studies the prevalence trunk varicosities in the EVS rose from 11.5% in the 18-24 year old group to 55.7% in those aged 55-64. Although there is considerable anecdotal evidence to suggest that varicose veins are less common in developing countries like India the absence of adequate

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Epidemiological data leaves the question open. The search for more effective means of prevention and cure for this common condition continues and this dissertation covers almost all aspects of varicose veins.

From this back ground, the main aim of the present study is to evaluate the prevalence, demographic and clinical manifestation of lower limb varicose veins.

**Materials and Methods**

**Source, collection of data and Sample size**

This prospective randomized study. It is based on analysis of 80 cases of primary varicose veins of long saphenous vein with or without perforator in competence who got treated by either simple ligation or ligation with stripping of long saphenous vein from the period of June 2017 to June '2019 at Princess Esra Hospital, Shahali Banda, Hyderabad and Owasi Hospital and Research Centre, Kanchan Bagh, Hyderabad.

**Inclusion criteria**

Patients with primary varicose veins of long saphenous vein with incompetent sapheno femoral junction with or without thigh perforators and with or without below knee perforators.

**Exclusion criteria**

- Patients with secondary varicose veins.
- Patients with short saphenous vein varicosities.
- 3) Patients with long saphenous vein varicosities without sapheno femoral incompetence.

All patients were operated in Elective theatres with aseptic precautions under spinal / epidural / general anaesthesia. No local anesthesia was used patients were treated in Post-Operative Ward for the 1<sup>st</sup> postoperative day and shifted to General Wards to General Wards on 2<sup>nd</sup> post operative day.

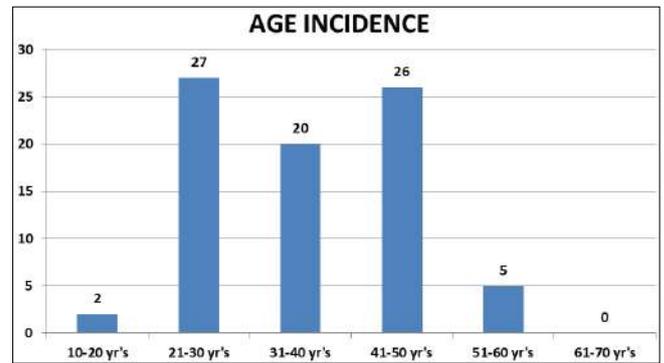
A thorough history was taken in all the patients. A detailed clinical examination was done. All the clinical tests were applied to arrive at a probable diagnosis. Then the patients were subjected to duplex ultrasonography to confirm the diagnosis. The routine investigations were also done. The patients underwent suitable treatment based on their clinical and investigational profile. The post-operative course was noted. Further the patients were followed up and final outcome evaluated. Ethical clearance was obtained from the ethical committee prior to conducting the study.

**Results and Discussion**

**Table 1:** Age incidence of patients

Age	No. of Cases	%
10-20	2	2.5
21-30	27	33.75
31-40	20	25
41-50	26	32.5
51-60	5	6.25
61-70	NIL	00

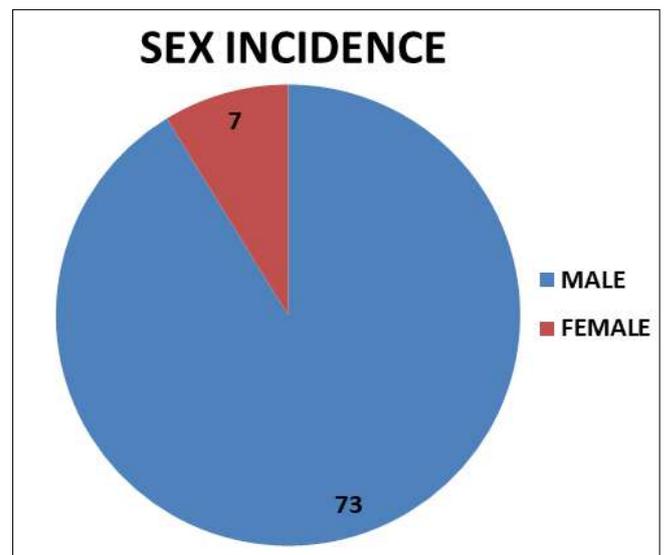
In the present study, most of the patients (93.4%) were in the 20-50 years age group.



**Fig 1:** Age incidence of the patients

**Table 2:** Sex incidence of the patients

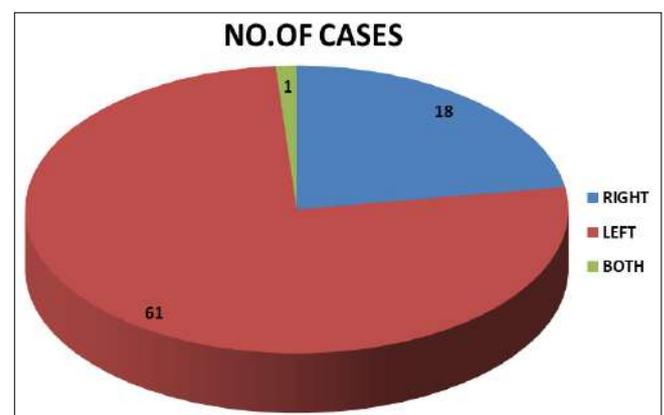
Sex	No. of Cases	Percentage
Male	73	91.25
Female	07	8.75
Total	80	100



**Fig 2:** Sex incidence of the patients

**Table 3:** Side of the Limb Incidence

Limb	No. of Cases	Percentage
Right	18	22.5
Left	61	76.25
Both	01	1.25
Total	80	100



**Fig 3:** Limb incidence of the patients

**Table 4:** Occupation distribution

Sl. No.	Occupation	Patients	%
1.	House wife	14	17.50
2.	Coolie	10	12.5
3.	Bus conductor	5	6.25
4.	Police trainee	5	6.25
5.	Farmer	16	20
6.	Machine turner	05	6.25
7.	Carpenter	5	6.25
8.	Bakery supplier	5	6.25
9.	Hotel cook	3	3.75
10.	Hotel vendor	6	7.5
11.	School teacher	5	6.25
12.	Construction worker	1	1.25

Out of 80 patients, 70 patients were studied in their occupation and continuously involved in working and prolonged standing showed muscular effect.

**Table 5:** Clinical Manifestation of varicose vein patients of the study group

Symptoms	No of patients	%
Pain and prominent veins	20	25
Prominent veins with swelling	25	31.25
Eczema and pigmentation	15	18.75
Ulcer, eczema and pigmentation	20	25

## Discussion

Out of 80 patients studied maximum numbers of patients were in the 21-30 years (33.75%) age group. Majority of the cases 91.25 % in the age group 20-50 years.

In our study there was including of both male and females. We found that male (91.25%) patients were dominant than the female. This could be due to cultural factors and social constraints.

The right limb was involved in 18 cases and the left limb in 61 cases. This is because the left iliac vein joins the right iliac vein at right angles and being pressed constantly by loaded colon and the right and left common iliac arteries crossing over the left common iliac vein. The present study showed slightly increased incidence of varicosity on the left limb. This compares with the study conducted by AHM Dur, AJC Mackaay *et al* [7]. The cause of increased incidence of left side is not known. The probable reason for increased incidence on left side is that the venous drainage of the left leg follows a more tortuous course through the pelvis, with left common iliac vein traversed by the right common iliac artery [8]. The bilateral varicose veins were seen in 9.37% of patients

Out of 80 patients, 70 patients were studied in their occupation and continuously involved in working and prolonged standing showed muscular effect. The present study showed 81% of the patients had occupation history of prolonged standing, which suggests that occupation has a definite role as a causative or a contributing factor.

The occupation of these patients studied with respect to the area of work showed that varicose veins are more common among urban housewives, probably as a result of their habit of prolonged standing during work.

Majority of the patients in this study reported to the hospital for some complications of the disease (60%) rather than for the treatment of the visible veins itself (40%). The most common symptom was pain with prominent veins which occurred alone or in combination with oedema, eczema, pigmentation or ulceration. It is evident that cosmetic purpose is not a factor

which prompts the Indians to seek treatment for varicose veins as do those in the west [8].

This study was done to seek a better knowledge about the epidemiology of the varicose veins in the local population which visited this hospital. The study also aims to spread awareness about the lifestyle which leads to the development of varicose veins and to take measure to avoid them.

## Conclusion

The varicose veins of lower limbs are a disease of younger age group, occurring more commonly during third and fourth decades of life. The occupations involving prolonged standing and violent muscular efforts are more prone for developing varicose veins. Family history is found to be another contributory factor. Majority of our patients presented with complications of varicose veins rather than the disease itself. Presence of prominent swellings in lower limb and pain were the commonest presenting symptoms.

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**Conflict of Interest:** None

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