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# Clinicopathological Study of Varicose Veins and Its Managment

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**ABSTRACT:**
**Introduction:** Varicose veins have always bothered mankind. These have been recognized as a chronic disorder since ancient times as their discussion is documented from the days of Hippocrates 2500 years ago. He observed that 'it was better not to stand in the case of an ulcer on the leg' with reference to varicose veins1. The condition, affected by man's upright position and by gravitational forces, is wide spread, involving at least one out of five individuals in the world, hence making this a very common condition. 20% of the population suffers with varicose veins and 2% have skin changes that may precede venous ulceration7. With continuing advances in methods of evaluating venous anatomy and haemodynamics the therapy for varicose veins is in a period of change.
**Aim:** Analyse the various clinical-pathological presentations, complications of varicose veins and various modalities of treatment, incidence of varicose ulcer, and incidence of recurrent varicose vein.
**Materials and Methods:** The study was prospective study conducted from October 2019 to August 2021 to study "Clinicopathological Study Of Varicose Veins And Its Managment" in 60 patients admitted through surgery Outpatient department / Emergency / transferred from other departments in Chhatrapati Shivaji Subharti Hospital, Meerut.

**Results:** Current study showed proportion of male subjects higher than female subjects. 45% had left limb involvement whereas 15% had both limbs involved. Study reported 20% incidence of varicose ulcer. 81.67% had below knee performance incompetence. 36.67% were given SFJ flush ligation with stripping of LSV with incompetent perforator ligation. 98.33% had no signs of recurrence whereas only 1.67% had reported recurrence.

## I INTRODUCTION :

Varicose veins have always bothered mankind. These have been recognized as a chronic disorder since ancient times as their discussion is documented from the days of Hippocrates 2500 years ago. He observed that 'it was better not to stand in the case of an ulcer on the leg' with reference to varicose veins1Varicose veins are not only dilated veins but also tortuous and elongated, but physiologically speaking a varicose vein is one which permits reverse flow through its faulty valves. . In the developed countries patients turn up to treatment, for cosmetic reasons, however in our Indian scenario it is the complications and not the cosmetic reasons that brings the patient to the doctor. The condition, affected by man's upright position and by gravitational forces, is wide spread, involving at least one out of five individuals in the world, hence making this a very common condition. 20% of the population suffers with varicose veins and 2% have skin changes that may precede venous ulceration4. Postural discomfort like heaviness, dull aching pain, swelling, dilated veins are the usual presentations6. Varicose veins can complicate in form of bleeding, eczema, thrombophlebitis, ulceration, ankle deformity in form of equinus varus and deep vein thrombosis 7,8. This study was conducted to evaluate the clinic-pathological variations of varicose veins and its management.

## II AIMS :

To analyse the various clinical-pathological presentations, complications of varicose veins and various modalities of treatment, incidence of varicose ulcer and incidence of recurrent varicose vein.

## III MATERIALS AND METHODS:

The study was prospective study conducted from October 2019 to August 2021 to study **"Clinicopathological Study Of Varicose Veins And Its Managment"** in 60 patients admitted through surgery Outpatient department /

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Emergency / transferred from other departments in Chhatrapati Shivaji Subharti Hospital, Meerut.

## IV RESULTS:

The proportion of male subjects (73.33%) was higher than male subjects (26.67%). In the age group wise distribution among the study subjects, the proportion of 31–40-year age group (38.33%) was maximum and 18-30 year age group (15%) was the least. The proportion of subjects having varicose veins was higher among those who were associated with occupations involving prolonged standing (60%) in comparison to those who were associated with occupations not involving prolonged standing (40%). Among the subjects, 85% had no family history while 15% had family history.In the study among the subjects, 45% had left limb involvement whereas 15% had both limbs involved. The study showed that 31.67% of the subjects had prominent veins with swelling whereas 35% had pain and prominent veins and 20% reported ulcer, eczema and pigmentation. In venous system involvement among the study subjects, 91.67% had long Saphenous vein involvement whereas 3.33% had short Saphenous vein involvement. Among the subjects, 80% had no incidence of varicose ulcer whereas 20% reported incidence of varicose ulcer. 81.67% of the subjects had below knee performance incompetence whereas 11.67% reported thigh performance incompetence. Among the subjects, 36.67% were given SFJ flush ligation with stripping of LSV with incompetent perforator ligation whereas 33.33% were given RFA (Radiofrequency Ablation) and 13.33% were given SFJ flush ligation with stripping of LSV. Among the subjects, 66.67% had 1-2 days whereas 28.33% had 3-4 days and 5% had 5 days of hospital stay. The Mean±SD days of hospital stay was found to be 2.92±4.01 days. Among the subjects, 98.33% had no signs of recurrence whereas only 1.67% had reported recurrence. In the study 3.33% of the subjects had reported seroma and the same proportion of subjects had infection as complication.

## V DISCUSSION:

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 rat
her than the disease itself[10] .

### 1. GENDER

The proportion of male subjects was higher than female subjects in our study. Similarly Kumar GN et al[5] in their study found that out of 50 patients 13 were female and 37 were male. These findings are similar to our study. Edinburgh et al, study showed that the age adjusted prevalence of trunk varices was higher in men (39.7%) than women (32.2%)67 . It is in contrast with the distribution reported by Mirji B et al[2] which reported more female subjects.

### 2. AGE

In the current study the proportion of 31–40 year age group was maximum and 18-30 year age group was the least. Mirji P et al[2] , in his descriptive study reported that youngest was 20 yrs and oldest was 65 yrs most common age group of incidence of varicose veins being 21-3013 . Prasad P et al reported the commonest age at presentation to be 30-40 yrs, which is similar to our study[11] .

### 3. OCCUPATION

The current study reports that the proportion of subjects having varicose veins was higher among those who were associated with occupations involving prolonged standing in comparison to those who were associated with occupations not involving prolonged standing.

Similarly Kumar GN et al[5] in their study revealed that subjects who required standing for long duration during their work, contributing to development of varicose veins. The finding in the present study is similar to study done by Mirji B et al[2] It has been reported in the research done by Kudchadkar, SJ et al[3] that a definite relationship exists between occupation involving prolonged standing and the incidence of varicose veins.

This is due to gravity causing pooling of blood in lower extremities while standing still for longer periods resulting in dysfunction of venous valves finally resulting in venous hypertension[5] .

### 4. FAMILY HISTORY

The current study reported that majority of the subjects had no family history. Similar results were observed in research done by Kudchadkar, SJ et al[3] . Effect of family history, Finland study showed high prevalence rate but incidence substantially less than usually proposed in literature[5]. Similarly Kumar GN et al[5] in their study revealed 14% (7 cases) familial incidence was noted in this series.

### 5. SIDE OF LIMB INVOLVEMENT

The current study showed that majority of subjects had left limb involvement whereas only

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15% had both limbs involved. Similarly Kumar GN et al[13] in their study showed that in 19 (48%) cases, left lower limb was involved and in 11 (27%) cases right lower limb was involved and in 10 (25%) both the limbs were involved. These findings are approximately similar to our study. In a study conducted by Dur AHM,, Mackaay AJC et al[12], left side more common involved 51.45% and 48.55% in right side[12] .

Mirji P et al[2] , showed left lower limb is more commonly involved in comparison with right lower limb.

**6. CLINICAL MANIFESTATION**

The current study reported that majority of subjects had pain and prominent veins followed by prominent veins with swelling and few reported ulcer, eczema and pigmentation as clinical manifestation. Another study done by Kumar GN et al[5] reported the commonest compliant was Dilated and tortuous veins followed by pain in the affected limb and had darkening of skin around ankle.

It is evident that all the patients with varicose veins have the complaint of dilated tortuous veins of the lower extremities. The other complaints those may be present include pain, swelling, itching and ulceration. Pain is usually dull aching after prolonged standing. This can occur due to venous stasis and increased intra-venous pressure or due to associated deep vein thrombosis. Swelling may be complained due to the oedema occurring once again as result of increased venous hypertension.

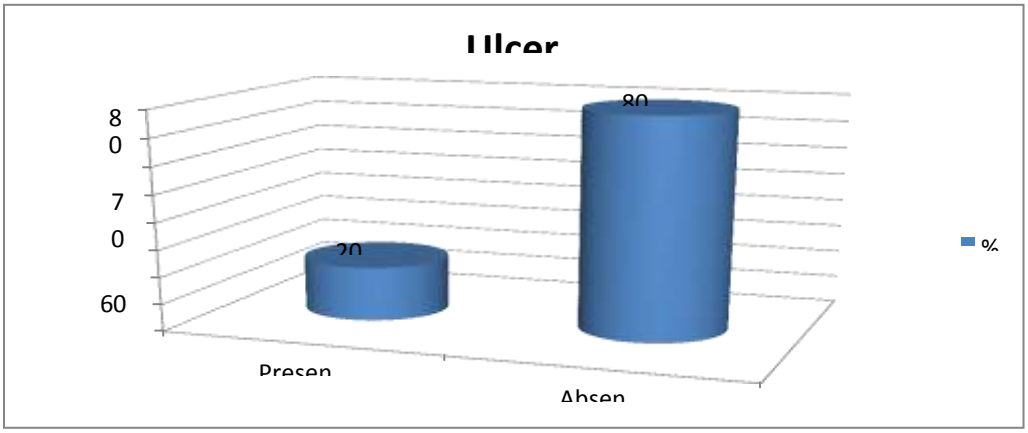
Itching occurs due to the release of various vaso-active peptides from the trapped leucocytes, and the deposition of hemosiderin from the lysed RBCs. Ulceration is due to the ischemic necrosis of the epidermal and dermal elements due to disturbance in microcirculation of skin. The findings of the present study also co-relate the results of study done by Khan SM et al[8]. This could be due to the decreased awareness in the Indian population and hence the initial negligence of this disease

**7. VENOUS SYSTEM INVOLVEMENT**

The current study reported that the long Saphenous vein involvement was the commonest followed by short Saphenous vein involvement. Delbe and Mocquet in their study had found varicosity of long saphenous vein in 98% and 2% in short saphenous vein.[5]

**8. INCIDENCE OF VARICOSE ULCER**

Incidence of varicose ulcer was reported in 20% of the subjects in our study. Similar results were found in study done by Jaykar RD et al[9] **(Graph 1)**




**Graph 1 : Incidence of varicose ulcer among the study subjects**

**9. PERFORATOR INCOMPETENCE**

The current study reported that among the subjects, majority had below knee perforator incompetence (81.67%) followed by thigh performance incompetence (11.67%). A study done by Kumar GN et al[5] have reported more of above ankle performance incompetence followed by below knee performance incompetence. They had a total of 92 perforators incompetent by clinical examination and 139 by colour Doppler.

10. **TREATMENT GIVEN**

In the current study maximum of subjects were given SFJ flush ligation with stripping of LSV with incompetent perforator ligation (36.67%) followed by RFA (Radiofrequency Ablation: 33.33%) and SFJ flush ligation with stripping of LSV. In study conducted by Kumar GN et al[5], quarter of total SFJ ligation cases with stripping of LSV with incompetent perforator ligation was done and in few patients only SPJ ligation was done. Saphenofemoral junction ligation including the ligation of tributaries at its termination with stripping of long saphenous vein by Myers stripper up to the knee and ligation of incompetent perforator. In the current study surgery was the mainstay of treatment.. In Pavan BK et al series all

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patients were managed surgically and patients were managed conservatively till surgery was feasible. **(Table 1)**

| Treatment Given | N | % |
|---|---|---|
| SFJ flush ligation with stripping of LSV | 8 | 13.33 |
| SFJ flush ligation with stripping of LSV with incompetent perforator ligation | 22 | 36.67 |
| SFJ, SPJ ligation with stripping of LSV with incompetent perforator ligation | 3 | 5 |
| SPJ ligation without stripping of SSV | 2 | 3.33 |
| Conservative management | 5 | 8.33 |
| RFA (Radiofrequency Ablation) | 20 | 33.33 |

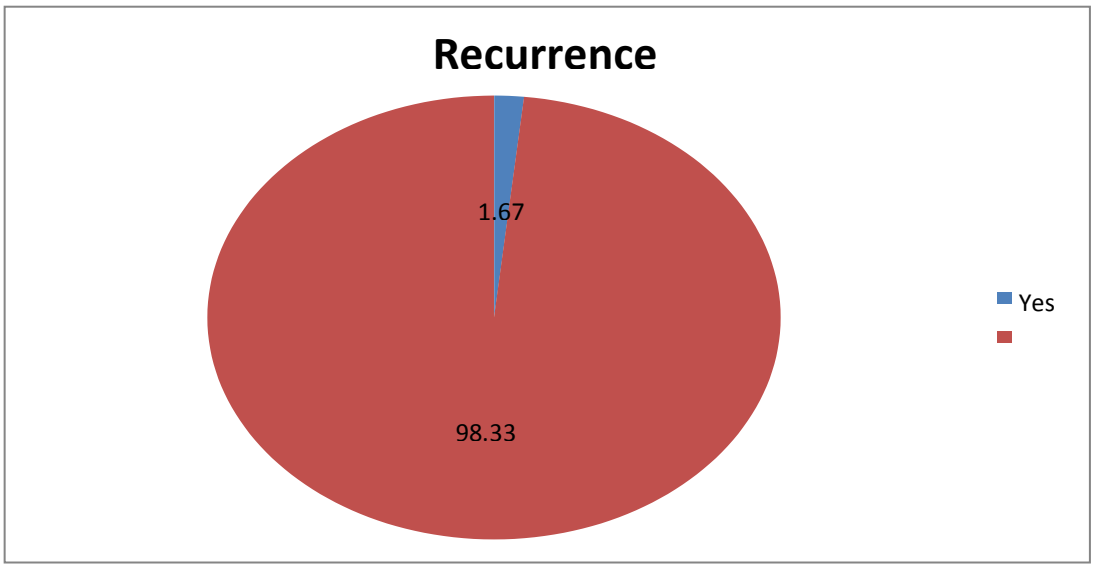
**Table 1 : Treatment given among the study subjects**

**11. DURATION OF POST OPERATIVE HOSPITAL STAY**

The current study reported that majority of subjects stayed in hospital post operative 1-2 days and the average time in hospital was approximately 3 days. In study conducted by Kumar GN et al[5], about 64% of the patients were discharged in 10 days and 28% had to stay for 15 days, 8% of the patients were discharged after 15 days.

**12. RECURRENCE**

The current study reported very few cases of recurrence post operatively. Similar results were reported by by Jaykar RD et al[9] . (Graph 2)




**Graph 2: Duration of the study subjects according to recurrence**

**13. POST OPERATIVE COMPLICATIONS**

The current study reported that 3.33% of cases had seroma or infection as post operative complication. The results of the current study looks very promising when compared to Defty C et al, who reported around 18-20% of post op complication[13] . A study done by Mirji P et al[2] also reported wound infection as the most common post-operative complication. Complication of stripping like saphenous neuritis may be avoided by having short segment stripping done, without affecting the overall outcome of the surgery.Complications are negligible if cases are meticulously selected and operated. Though the newer trends in the management of varicose veins

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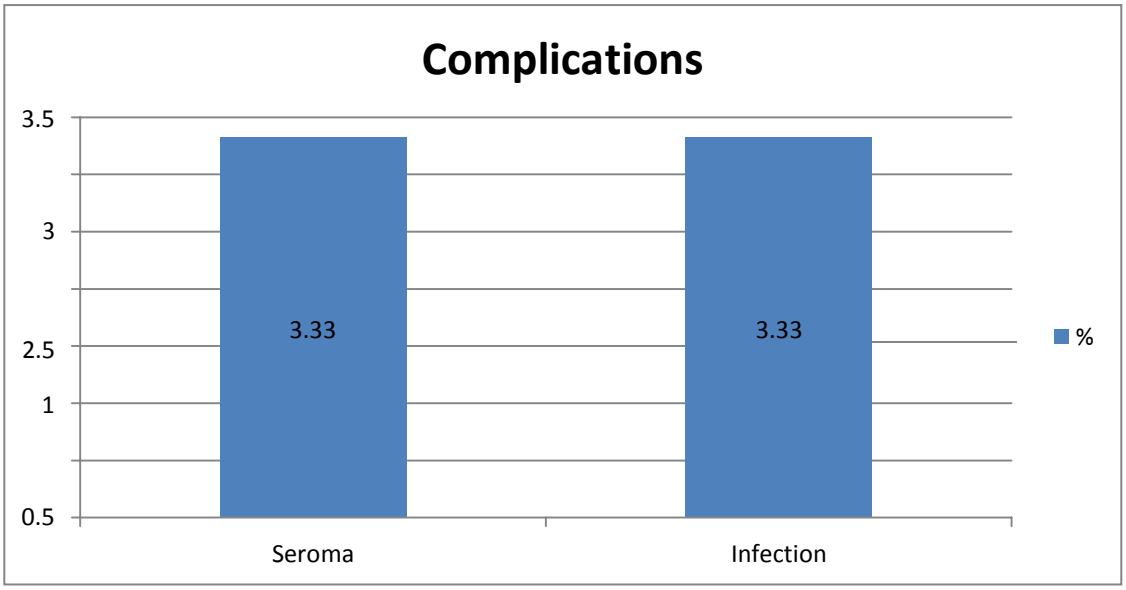
are showing good results, they need a long term follow up. **(Graph 3)**




**Graph 3: Duration of the study subjects according to complications**

## VI CONCLUSION:

Varicose veins is a common disease affecting the middle aged group males rather than females and people engaged in occupations involving prolonged hours of standing. Commonest presentation is dilated veins affecting unilateral limbs, with associated symptoms of itching, pigmentation and ulceration. Varicosity of the lower limb is a fairly common clinical entity. The involvement of long saphenous system is more common than the short saphenous system and left limb is affected more than right limb. Conservative treatment though relieves symptoms, it cannot be the definitive treatment and it has to be followed by some form of definitive treatment. Operative line of treatment is a primary procedure in the management of varicose veins of lower limbs. LSV tripping up to knee and non stripping of SSV is associated with less morbidity. Complications are negligible if cases are meticulously selected and operated. The present procedures enable the patient to lead almost normal life after surgery and the morbidity rate is very negligible. Though the newer trends in the management of varicose veins are showing good results, they need a long term follow up.

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