

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

Dr. M A Hari Babu^{1*}, Dr. N. Bharath Kumar²

^{1*}Associate Professor, Department of General Surgery, Govt Medical College, Ananthapur, AP.

²Final year Post Graduate, Department of General Surgery, Govt Medical College, Ananthapur, AP.

Corresponding Author: Dr. M A Hari Babu

Associate Professor, Department of General Surgery, Govt Medical College, Ananthapur, AP.

Submission: 05-November-2022, Acceptance 10-11-2022, Publication: 20-11-2022.

Abstract

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. 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.

Materials and methods: The present study had been carried out in the tertiary care hospital settings of surgery department at Govt Medical College, Ananthapur. The study was prospective observational single center study. The period of study was from October 2021 to September 2022 for 12 months. 60 patients were selected for the study. Patients of varicose veins of lower limbs of age 14 years and above irrespective of sex, cases of recurrent varicose veins, patients of chronic varicose veins and its complications like venous ulcer, deep vein thrombosis were included in the study. Patients who did not give valid informed consent, unreported serious adverse events and patients not following instructions of operating surgeon also not coming for follow up were excluded from the study.

Results: Varicose veins of the lower limb are disease of adult life. The youngest in the study was 23 years and the eldest was 69 years. In our study, 46 patients were male and 14 patients were female. Farmers forms the largest proportion around 33.33%. Manual labourer forms 30%. This disease affects mostly lower socioeconomic classes and those who stand for prolonged periods. In our study, almost all patients came with complaint of prominent veins at the time of presentation out of which 76.67% of patient's shares isolated prominent veins. Other symptoms like pain, pigmentation, edema and ulceration were also associated with prominent veins.

Conclusion: The study revealed that the varicose veins of lower limbs are a disease of younger age group, occurring more commonly during third and fifth decades of life. The majority of the patients were male and unskilled workers probably due to life style factors like prolonged standing during work hours. Added to this could be the lack of awareness and understanding of these patients on issues related to occupational risk involved in this condition

Key Words: Varicose veins, venous hypertension, pigmentation, edema and ulceration.

INTRODUCTION

Varicose veins are superficial veins 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.³ The disease is one of the most common surgical problems among low socioeconomic groups in India. 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.⁴

So far as the aetiology is concerned varicose veins mostly occur due to incompetence of their valves. Risk factors for varicose veins include obesity, female sex, inactivity and family history. Varicose veins are penalty of erect posture which the human beings have adopted. Commonly occurs in those whose works demand standing for long hours like conductors, drivers of the trams.⁵

The objectives of our study was to study the clinical profile of varicose veins, complications of varicose veins, different modalities of treatment of patients of varicose veins and advanced modalities for treatment of varicose veins.

MATERIALS AND METHODS

The present study had been carried out in the tertiary care hospital settings of surgery department at Govt Medical College, Anantapur. The study was prospective observational single center study. The period of study was from October 2021 to September 2022 for 12 months.

60 patients were selected for the study. Patients of varicose veins of lower limbs of age 14 years and above irrespective of sex, cases of recurrent varicose veins, patients of chronic varicose veins and its complications like venous ulcer, deep vein thrombosis were included in the study. Patients who did not give valid informed consent, unreported serious adverse events and patients not following instructions of operating surgeon also not coming for follow up were excluded from the study.

All patients' detailed history were taken like age, sex, occupation, complaints, past history of any operation, obstetric history in case of female patients. All clinical tests of varicose veins were applied for every patient.

General, systemic and local examination was done. Patients of affected limb was classified as per CEAP classification. All patients were subjected for duplex (Doppler)-USG of affected limb. All patients were offered conservative treatment in the form of compression stockings, advice regarding change of lifestyle, occupation counselling. Medical (drug) treatment as per the need was given. Follow up after 4 weeks was advised. Patients were subjected to surgical interventions as indicated.

Data analysis: The postoperative course was noted, minor complications were attended and treated accordingly. Patients were followed up after 4 weeks. Final outcome was evaluated. All the clinical data of each patient were recorded in the pre coded clinical proforma designed for the study, analysed using IBM SPSS Software and was compared with various other studies.

RESULTS

Varicose veins of the lower limb are disease of adult life. The youngest in the study was 23 years and the eldest was 69 years. In our study, 46 patients were male and 14 patients were female. Farmers forms the largest proportion around 33.33%. Manual labourer forms 30%. This disease affects mostly lower socioeconomic classes and those who stand for prolonged periods.

| Age in years | Number | Percentage |
|--------------|--------|------------|
| 20-30 | 10 | 16.67 |
| 31-40 | 16 | 26.67 |
| 41-50 | 16 | 26.67 |
| 51-60 | 14 | 23.33 |
| 61-70 | 4 | 6.66 |
| Total | 60 | 100 |

Table 1: Age distribution

| Gender | Number | Percentage |
|--------|--------|------------|
| Male | 46 | 76.67 |
| Female | 14 | 23.33 |

Table 2: Gender distribution

| Limbs involved | Number | Percentage |
|----------------|--------|------------|
| Right | 24 | 40 |
| Left | 28 | 46.67 |
| Both | 8 | 13.33 |
| Total | 60 | 100 |

Table 3: Limb involvement

| Veins involved | Limbs | Percentage |
|-----------------|-------|------------|
| Great saphenous | 58 | 96.67 |
| Short saphenous | 2 | 3.33 |
| Both | 0 | 0 |
| Perforator | 48 | 80 |

Table 4: Venous system involved

The right limb was involved in 40% of cases and the left limb in 46.67% of cases. The bilateral varicose veins were seen in 13.33% of patients.

| Site of incompetence | Number | Percentage |
|---------------------------------|--------|------------|
| Great saphenous vein | 10 | 16.67 |
| Great saphenous vein+perforator | 38 | 63.33 |
| Short saphenous vein | 2 | 3.33 |
| Perforator | 10 | 16.67 |

Table 5: Site of incompetence

| Symptoms | Number | Percentage |
|-------------------------------------|--------|------------|
| Prominent veins | 46 | 76.67 |
| Prominent veins + pain | 6 | 10 |
| Prominent veins + pigmentation | 2 | 3.33 |
| Prominent veins + healed ulceration | 4 | 6.67 |
| Prominent veins + active ulceration | 2 | 3.33 |

Table 6: Clinical features at presentation

In our study, almost all patients came with complaint of prominent veins at the time of presentation out of which 76.67% of patient's shares isolated prominent veins. Other symptoms like pain, pigmentation, edema and ulceration were also associated with prominent veins.

| Surgical procedures | Number | Percentage |
|--------------------------------------|--------|------------|
| Saphenofemoral flush ligation (SFFL) | 6 | 10 |
| Bisgards regime | 2 | 3.33 |

| | | |
|--|----|------|
| (BR)+perforator ligation (PL) | | |
| PL | 6 | 10 |
| Subfascial endoscopic perforator ligation (SEPS) | 2 | 3.33 |
| Saphenopopliteal ligation (SPL) | 2 | 3.33 |
| Sapheno-femoral flush ligation+stripping | 6 | 10 |
| Sapheno-femoral flush ligation+stripping+PL | 36 | 60 |

Table 7: Surgical procedures performed

| Postoperative complications | Number | Percentage |
|-----------------------------|--------|------------|
| Wound infection | 2 | 3.33 |
| Saphenous neuritis | 2 | 3.33 |
| Hematoma | 6 | 10 |
| Residual varicosity | 2 | 3.34 |
| Total | 12 | 20 |

Table 8: Postoperative complications

| Hospital stay in days | Number | Percentage |
|-----------------------|--------|------------|
| <5 | 0 | 0 |
| 5-10 | 20 | 33.33 |
| 11-15 | 32 | 53.34 |
| >15 | 8 | 13.33 |

Table 9: Duration of hospital stay

DISCUSSION

In our study the age range is from 23 years to 69 years and the most common age group for varicose veins was 31-50 years. 32 patients, more than 50% of the patients were in the age group of 31-50 years. Joseph et al found that majority of cases were of the age group 41-50 years. Athar Mohammad et al studied that most of the patients (93.4%) were in the 20-50 years age group. Mirji et al study revealed that the disease was more prevalent during the active adult life in their 3rd and 4th decades. Piazza studied that majority of cases were between the ages of 40 to 80 years.⁶

The right limb was involved in 24 cases and the left limb in 28 cases. Our study showed slightly increased incidence of varicosity on the left limb. The cause of increased incidence of left side was not known. The probable reason followed a more tortuous course through the pelvis, with left common ileac vein traversed by the right common ileac artery. The bilateral varicose veins were seen in 13.33% of patients. Joseph et al studied that varicose veins on the left side were more involved than on the right. Mohammad et al recorded that the right limb was involved in

less cases than the left limb. Mirji et al study showed slightly increased incidence of varicosity on the left limb.⁷

Sapheno-femoral 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 36 cases. Sapheno-popliteal flush ligation was done in 4 cases and flush ligation of SFJ and stripping of LSV was done in 3 cases. Subfascial endoscopic perforator ligation performed only in one case. In Pavan et al series all patients were managed surgically and patients were managed conservatively till surgery was feasible.⁸

Total complication rate observed during the postoperative period and follow up was 20%. Most were managed conservatively. Hematoma was the most common postoperative complication. The incidence of sensory impairment following surgery was 3.33%. Residual varicosity observed in only one case and managed conservatively. Defty et al reported around 20% of post op complications which was similar to our study.⁹

Out of 60 patients, 32(53.34%) patients were discharged in between 11-15 days. 8 patients (13.33%) had to stay for more than 15 days and 20 patients were discharged within 10 days of admission. Kumar et al studied that out of 50 patients, 32 patients were discharged at the end of 10 days. 4 patients (8%) had to stay for more than 15 days.¹⁰

CONCLUSION

The study revealed that the varicose veins of lower limbs are a disease of younger age group, occurring more commonly during third and fifth decades of life. The majority of the patients were male and unskilled workers probably due to life style factors like prolonged standing during work hours. Added to this could be the lack of awareness and understanding of these patients on issues related to occupational risk involved in this condition. The reasons for the less number of female in the study is not known. Probably our middle class and lower class women are not much worried about the cosmetic appearance or less average height compared to male or less violent muscular activity.

Most of the patient seek medical attention due to varicosities and ten percentage of patient complaints discomfort or pain. The study revealed slightly increased incidence of varicosity in the left lower limb as compared to right lower limb.

REFERENCES

1. Cranely JJ. Varicose veins, deep vein thrombosis and hemorrhoids, epidemiology and suggested etiology. Br Med Jr. 1972;2:556.
2. Mirji P, Emmi S, Joshi C. Study of clinical features and management of varicose veins of lower limb. J ClinDiagn Res. 2011;5(7):1416-20.

3. Campbell WB, Halim AS, Aertssen A, Ridler BM, Thompson JF, Niblett PG. The place of duplex scanning for varicose veins and common venous problems. *Annals Royal College Surg Eng.* 1996 Nov;78(6):490.
4. Das K, Ahmed S, Abro S, Arain Ms. Varicose Veins. *The Professional Medical J.* 2014;21(03):509-13.
5. Pavan Prasad BK, Prem Kumar A. Clinical study of varicose veins and their management. *Int J Biomed Advance Res.* 2015;6(08):564-8.
6. Kontosic I, Vukelic M, Drescik I, Mesaros-Kanjski E, Materljan E, Jonjic A. Work conditions as risk factors for varicose veins of the lower extremities in certain professions of the working population of Rijeka. *ActaMedica Okayama.* 2000;54(1):33-8.
7. Joseph N, Abhishai B, Thouseef MF, Devi MU, Abna A, Juneja I. A multicenter review of epidemiology and management of varicose veins for national guidance. *Ann Med Surg (Lond).* 2016;8:21-7.
8. Mohammad A, Reddy JK. Study on prevalence, demographic and clinical manifestations of lower limb varicose veins. *Int J Surg Sci.* 2019;3(4):272-4.
9. Mirji P, Emmi S, Joshi C. Study of clinical features and management of varicose veins of lower limb. *J Clinic Diagn Res.* 2011;5(7):1416-20.
10. Piazza G. Varicose veins. *Circulation.* 2014;130(7):582-7.