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Original Research Article

Evaluation of the Clinical Characteristics and Management of Lower Limb Varicose Veins

Anupam Ranjan[1], Sweta Rani[2], Shri Krishna Ranjan[3]

[1]Senior Resident, Department of General Surgery, A. N. Magadh Medical College and Hospital, Gaya, Bihar, India

[2]Assistant Professor, Department of Obstetrics & Gynaecology, A. N. Magadh Medical College and Hospital, Gaya, Bihar, India[2]

[3]Associate Professor, Department of General Surgery, A. N. Magadh College and Hospital, Gaya, Bihar, India

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Corresponding author: Anupam Ranjan

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Abstract:

Objectives: Varicose veins in the lower limbs are the most common peripheral vascular disease, and therapy for these conditions' dates to the dawn of time. The goal of this research is to examine the various clinical manifestations of varicose veins, their therapy, and their consequences.

Materials and Methods: Patients who were admitted and received treatment at A. N. Magadh College and Hospital, Gaya, Bihar for a while provided the research's data. After being informed about the nature of the condition, the many possible treatment modalities, and the results of those treatments, patients who had signs and symptoms of varicose veins and were found to have varicosities of the superficial veins upon clinical examination were included in the study.

Results: Our study revealed that the condition is much more common in active adulthood, namely for the age of thirties, and that males are more impacted than females. It has been discovered that careers requiring extended standing and the use of intense muscular exertion might cause or contribute to varicose veins. Varicose vein development may be significantly influenced by hereditary factors. 25% of patients reported a family history of close relatives suffering varicose veins. More individuals (60%) than those who sought treatment for cosmetic reasons visited the hospital due to illness problems. Patients had a range of symptoms and physical characteristics, with dilated and convoluted veins being more typical. The most frequent venous system impacted is the long saphenous system.

Conclusion: If cases are carefully chosen and handled, complications are only a few. The morbidity rate is extremely low thanks to the current methods, which also allow the patient to have a nearly normal life after surgery. Although the most recent approaches to managing varicose veins are producing positive outcomes, they still require long-term monitoring and preventive care for further diseased outcomes.

Keywords: Varicose Veins. Clinical Manifestations, Dermatitis, Surgery, Long Saphenous Vein.

Introduction

Since ancient times, varicose veins have been recognized as a chronic condition. The first recorded mention was found in Athens on the Ebers Papyrus 1550 B.C [1]. In the 1860s, evidence of surgical procedure was discovered, and a discussion from 2500 years ago, during the time of Hippocrates, is recorded. Regarding varicose veins, he noted that "it was better not to stand in the case of an ulcer on the leg" [2]. However, in the 20th century we saw significant advancements in its treatment. Between 40% and 60% of women and 15% to 30% of males suffer from varicose veins [3]. It affects at least one in five people worldwide, making it a prevalent condition that is caused by both gravitational forces and the upright position of man. Varicose veins affect 20% of people, and 2% of people develop skin abnormalities that could be precursors to venous ulcers [4]. Varicose comes from the Latin word varicous, which means dilated.

Physiologically, a varicose vein allows reverse flow through its damaged valves. Varicose veins not only inflated but also complex and elongated veins [5]. Despite being a prevalent ailment, varicose veins frequently go undiagnosed. In affluent nations, individuals seek treatment for cosmetic issues, but in Indian situation problem is not cosmetic concerns are what prompt the patient to see a doctor. A prevalent surgical issue among low

socioeconomic class individuals in India is the sickness, which occasionally forces the patient to change his line of work, which is really upsetting [6]. The management of varicose veins is undergoing transformation because of ongoing improvements in techniques for assessing anatomy and hemodynamics [7]. The goal of the current study is to examine the various clinical manifestations of varicose veins, their therapy, and their consequences.

Materials and Methods

Objective is to investigate the prevalence varicose veins by age, sex, and occupation. To investigate the symptoms and treatment options for lower limb varicose veins at A. N. Magadh College and Hospital in Gaya, Bihar.

Source of Data: All the patients with varicose veins who were admitted to the Department of Surgery at A. N. Magadh College and Hospital in Gaya, Bihar represent the clinical material for this present study.

Sample Size: During the research period, one hundred twenty-eight cases from all surgical units were admitted and operated on.

Collection of Data: For this study, all patients who met the inclusion and exclusion criteria were chosen.

Inclusion Criteria: Patients who have symptoms of varicose veins, those with diseased outcomes such pigmentation, dermatitis, ulceration, superficial vein thrombosis (SVT) etc., and patients with cosmetic concerns were the inclusion criteria. Patients with main lower limb varicose veins met the most rigorous requirements.

Exclusion Criteria: The study didn't involve any of the participants who received outpatient care. Patients with secondary varicose veins brought on by severe thrombosis of the deep veins were also eliminated, as were patients with additional venous obstructions such as masses in the abdomen and pregnancy. Therefore, the participants in this study were one hundred twenty-eight patients who met these requirements. Prior to any study or action, each patient's informed consent was sought.

Each patient's history was carefully gathered. A thorough clinical examination was performed. A likely diagnosis was reached after applying all clinical tests. Duplex ultrasonography was then performed on the patients to diagnose. The usual investigations were also carried out. Based on their clinical and investigative profiles, the patients received the best treatment possible. Post-operative care was noted and followed up on and the results were assessed. Prior to beginning the study, the ethics committee granted its approval.

Results

The study includes 128 primary varicose vein patients (140 limbs) who were hospitalized, examined, operated on, and followed up on.

In this study, men comprised 75% (96) of all cases, whereas women made up just 25% (32) of all patients. Out of the 128 patients investigated, 104 patients' jobs required extensive durations of standing, significant muscular activity, or both. 32 of the 128 patients examined had a family history of the condition affecting multiple members of the same family. The most common symptoms were sharp pain, which could also include edema, eczema, pigmentation, or ulceration (Table 1). 90% of instances, based on this study, involved the long saphenous system (Table 2).

Most of the patients in the current series belonged to CEAP classes 2 and 3, including patients who just had varicose veins and who had limb edema. The patients who had paired valvular incompetence had higher grades of clinical CEAP class. All the ulcer patients exhibited perforator incompetence.

Table 1: Clinical manifestations of varicose veins

Symptoms	No. Of patients	%
Sore and exposed veins	48	37.5
Prominent superficial veins with swelling	40	31.25
Pigmentation of effected limb	16	12.5
Pigmentation, eczema, and sores	24	18.5

Table 2: Venous System Involvement

System Involved	Limbs	%
Long saphenous vein	116	90.62
Short saphenous vein	4	3.12
Both veins	8	6

Most of the patients in this study were incompetent across numerous areas. Sapheno-femoral and perforator incompetence affected over 71% of individuals, whereas 5.7% also had sapheno-popliteal and perforator incompetence. Only isolated instances of site incompetence were noted. There were (8.57%) patients that experienced isolated perforator incompetence. 11.4% of limbs had isolated sapheno-femoral incompetence, while 2.8% of limbs had isolated sapheno-popliteal

incompetence (Table 3). Ineffective perforators affected 120 limbs overall (87.6%).

Table 3: Surgical procedures performed

S. No.	Surgery	Limbs	%
1.	Saphenofemoral flush ligation	16	11.43
2.	Saphenofemoral flush ligation and Stripping	20	14.28
3.	Saphenofemoral flush ligation and Multiple subfascial ligation	40	28.57
4.	Saphenofemoral flush ligation, Multiple subfascial ligation and stripping	28	20
5.	Saphenofemoral flush ligation and Multiple stab avulsion	8	5.71
6.	Saphenofemoral flush ligation, Multiple subfascial ligation and skin grafting	4	2.86
7.	Saphenofemoral flush ligation, Sapheno-popliteal junction ligation, stripping and skin grafting	4	2.86
8.	Multiple subfascial ligation	8	5.71
9.	Sapheno-popliteal junction ligation	4	2.86
10.	Sapheno-femoral junction ligation, Sapheno-popliteal junction ligation, stripping and Multiple subfascial ligation	4	2.86
11.	Multiple subfascial ligation and skin grafting	4	2.86

There were 34% of overall complications seen during the post-operative care and its follow-up. Everyone was handled cautiously. There was no sensory impairment after surgery. Might be the case because, if feasible, lengthy segment saphenous vein stripping was avoided, and our patients—most of whom were peasants and workers—would not have been able to detect a minor difference in sensation.

Discussion

Many patients, according to the age distribution, are between 20 and 40 years old. They achieved 62.5% in this study, which is comparable with Lateef's study [8], which revealed 65%. The youngest one in this study was 20 years old, and the eldest was 65. In this study, the female patients primarily sought care for symptoms and problems as opposed to for cosmetic reasons. The present study's low incidence is likely the result of middle-class and lower-class women in India caring less about their appearance. According to the current study, 81% of the patients had a history of working long hours while standing, which shows that work may be the cause of the condition.

Varicose veins are more prevalent among urban housewives, perhaps because of their tendency of remaining seated for extended periods of time at work, according to the occupation evaluated in relation to the area of work. The presence of varicose veins in multiple members of the same family makes the possibility that hereditary factors cause development of the condition [9]. More patients in this study visited the hospital for disease-related problems (60%) than for visible veins (40%). The most common symptoms were sharp pain, which could also include edema, eczema, pigmentation, or ulceration. The left leg had a slightly higher incidence of varicosity, according to the current study. In 9.37% of patients, the bilateral varicose veins were visible. For confirming the diagnosis, duplex USG testing was performed on each patient in the current investigation. To correctly diagnose 4 cases of saphenofemoral incompetence, 1 case of sapheno-popliteal incompetence, and 8 cases of perforator incompetence, this examination was necessary. The mainstay of the treatment was surgery. Based on the patient's age, severity, and occupation, the surgical approach was chosen. Compression bandages, limb elevation, antibiotics, and other general supportive measures were used in conservative treatment for sequelae such oedema, eczema, and ulcers. Till surgery could be performed, conservative treatment was continued. Each patient in this study underwent a variety of surgical treatments, either singly or in combination, depending on their circumstance. Lower limb varicose veins are a disorder that primarily affects people in their third and fourth decades of life. Jobs that require a lot of standing around and strenuous physical activity are more likely to cause varicose veins [10].

Conclusion

A contributing aspect is discovered to be family history. Many of our patients didn't have varicose veins; instead, they had issues related to them. The most frequent presenting symptoms were pain and noticeable swellings in lower limbs. The investigation of choice is duplex ultrasonography. Individual valvular incompetence is less frequent than combined incompetence. The most frequent procedure in our hospital was a saphenofemoral junction flush ligation with numerous subfascial ligations of perforators. Depending on what was done, other techniques yielded positive outcomes.

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