ORIGINAL ARTICLE

CLINICAL CASE STUDY OF VARICOSE VEINS

ABSTRACT: Varicose veins are defined as dilated usually tortuous, subcutaneous veins >3mm in diameter measured in upright posture with a demonstrable reflux. Varicose veins affect mainly the economically productive age group individuals. The aim of my study was to analyze the age, sex, occupation, mean age of presentation, clinical presentations, complications, treatment options, surgical complications and hospital stay in a case varicose vein patient and to compare with the standard literature results. The study was conducted on 50 patients who came to MKCG MCH Brahmapur, Odisha for treatment during the period of Jun 2012- Jun 2014. The patients underwent thorough clinical examination and Doppler ultrasound of the involved limbs to see for the incompetency of venous system. The data of the study was represented by bar graphs and pie charts. Majority of the patients were of 20-40 years (70%). In our study males constituted 84% and females 16%. The common complaints were tiredness and aching sensations in the leg. But a significant number of patients in our study were having symptoms of advanced disease like hyperpigmentation (26%), ulcer (18%), eczema (16%) and edema (4%). This was probably because these patients neglected their disease in the early stage. Manual workers constitute 28% of our study. Occupations like manual laborer, salesman, farmers, and security guards constitute around 36%. Left sided lesions are common than right side. Long saphenous segment is more commonly involved than short saphenous segment. Both segments are involved in 10% of patients. Sapheno femoral incompetence is the most common observed pathology. The perforators below the knee are commonly involved than lateral perforators. Trendelenburg procedure with stripping of the involved segment is commonly done procedure. Next common is sub facial ligation. Skin staining is the common complication postoperatively. Recurrence occurs in 2% of patients. Mean hospital stay was 11 days’ minimum and 29 days maximum. It was finally concluded that varicose veins affected younger age group. Males dominated than females because male dominated society. It affects mostly individuals with long standing occupation. The patients were treated effectively and good results were obtained.

KEYWORDS: Varicose veins, Sapheno femoral incompetence, Trendelenburg procedure, Sub facial ligation.

INTRODUCTION: The great Indian surgeon of antiquity, Sushruta, offered the first recorded description of varicose veins. In the second volume of his samhita, he discussed siragranthi or “aneurysms of veins”1. Since antiquity, reports on varicose veins of lower limbs have been found, as documented in Ebers papyrus, during the rule of Amenhotep I (1550 B.C.). In ancient Greece, lower limb replicas were offered to gods in temples to obtain relief of symptoms. Also much has been written on the surgical treatment of varicose veins. There are reports of Hippocrates (460-
377 B.C.) cauterized varicose veins with a hot iron rod. Hippocrates also mentions in his works, with great frequency venous disease of lower limbs.² Many contributed to development for the development of new treatment modalities. Porter and Moneta classified varicose veins into seven classes according to the clinical signs, severity and disability rating scales.³

Varicose veins are defined as dilated usually tortuous, subcutaneous veins >3 mm in diameter measured in upright position with demonstrable reflux.⁴ Varicose veins are part of the penalty we pay for the erect posture.⁴ Varicose veins affects 25-30% female population and 15% in men.⁵ Risk factors for the development of varicose veins include advancing age, female gender, heredity and history of trauma to the extremity.⁵

Varicose veins frequently cause symptoms, the most common being aching or heaviness, which typically increases throughout the day. Other symptoms include ankle swelling and itching.⁴ Cutaneous burning sensation termed as “venous neuropathy” can also occur in patients with advanced venous insufficiency.⁵

The findings of varicose veins may include dilated, tortuous veins, telangiectasis and fine reticular varicosities.⁵ In varicose veins, the problem may lie in superficial venous system, deep venous system or perforating system. If the incompetent perforators are not properly localized and ligated they may complete the circuit of varicose veins draining blood from deep to superficial venous system there by leading to recurrence.⁶

The aim of the clinical examination is to localize the site of incompetence whether superficial or deep venous system. If it is superficial system then whether the problem is in sapheno femoral or sapheno popliteal junction or at perforator level. Various tests are done for this purpose like Brodie-Trendelenburg test, Tourniquet test, Perthe’s test, Schwartz test, Pratt’s test and Fegan’s test. These clinical tests should be combined together with diagnostic modalities like Duplex ultrasound imaging increases the sensitivity and specificity to exactly identify the incompetent sites and surgery can be performed by small incisions and allow for better and early wound healing and also can prevent recurrence of the disease.⁷

Although mortality due to varicose veins is very minimal but morbidity causes much misery and suffering as it occurs in prime time of life. As can be expected there is enormous loss of man power and productivity. Interestingly this disease has an effective treatment.

MATERIALS AND METHODS: The present work “CLINICAL CASE STUDY OF VARICOSE VEINS” was carried out in MKCG Medical College Hospital, Brahmapur, Odisha on patients with provisional diagnosis of varicose veins admitted to department of General Surgery and Cardio Thoracic Vascular Surgery department during June 2012 to June 2014.

This study comprises of patient of all age groups, both sexes having varicose veins. However study excluded the patients with deep venous thrombosis. All cases underwent detailed evaluation regarding presenting symptoms, duration and previous modality of treatment. Clinical examination was made as to which system was involved and to identify which superficial valves and perforators were incompetent. Deep vein patency was assessed. Abdominal and pelvic examination was done to search for secondary causes. Cardiovascular and peripheral pulses were assessed to exclude arterial disease. Routine investigations and selective duplex assessment was
done. Compressive therapy was advised for symptomatic groups. Ulcer was treated with dressing till healthy granulation tissue was seen

Most patients underwent surgical treatment. Choice of surgery is determined by the extent of disease and associated pathology. Postoperative crepe bandage was applied. These patients were reviewed 2 weeks after discharge and followed till 6 months.

STATISTICS AND RESULTS:

<table>
<thead>
<tr>
<th>AGE (YEARS)</th>
<th>MALE (NO)</th>
<th>%</th>
<th>FEMALE (NO)</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; 20 YEARS</td>
<td>3</td>
<td>6</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>21-30</td>
<td>16</td>
<td>32</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>31-40</td>
<td>10</td>
<td>20</td>
<td>4</td>
<td>8</td>
</tr>
<tr>
<td>41-50</td>
<td>9</td>
<td>18</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>51-60</td>
<td>4</td>
<td>8</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>&gt;60</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>TOTAL</td>
<td>42</td>
<td>84</td>
<td>8</td>
<td>16</td>
</tr>
</tbody>
</table>

TABLE 1: AGE-SEX DISTRIBUTION OF THE PATIENT

In my study male constitute 84% and female 16%. In contrast to the literature male female ratio was approx. 5:1.

Female are distributed around 25 to 40 years. Males 52% are in the age group around 21-40 years. Hence this disease mostly affects the economically productive group. Surprisingly as the age goes on disease is less prevalent.
Most of the people presented with symptoms persist more than 2 years before they seek the medical attention. 26% presents within six months duration and another 12% take about at least 2 years to medical consultation.

Those who take 2-5 years constitutes 42%. Those who take more than 5 years constitutes 20%. Time duration for the presentation between 3 months minimum and 20 years maximum.
Table 3: VARIOUS OCCUPATIONS OF THE PATIENTS

<table>
<thead>
<tr>
<th>OCCUPATION</th>
<th>NO</th>
<th>PERCENTAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>MANUAL LABOUR</td>
<td>14</td>
<td>28%</td>
</tr>
<tr>
<td>FARMER</td>
<td>7</td>
<td>14%</td>
</tr>
<tr>
<td>HOUSEWORK</td>
<td>4</td>
<td>8%</td>
</tr>
<tr>
<td>STUDENT</td>
<td>5</td>
<td>10%</td>
</tr>
<tr>
<td>SALESMAN</td>
<td>4</td>
<td>8%</td>
</tr>
<tr>
<td>SECURITY</td>
<td>3</td>
<td>6%</td>
</tr>
<tr>
<td>OTHERS</td>
<td>13</td>
<td>26%</td>
</tr>
<tr>
<td>TOTAL</td>
<td>48</td>
<td>100%</td>
</tr>
</tbody>
</table>

Manual laborer forms the largest proportion around 28%. Farmers and house workers forms 22%. This disease affects mostly lower socioeconomic classes and daily wagers. Those who stand for prolonged periods constitute salesman, security, constable’s manual laborers forms around 60%.
54% of the people presents with swelling and pain approximately 34% which are related primarily to the dilated varicose veins. Symptoms due to chronic venous congestion like skin change, discoloration swollen leg and ulceration was presents with 20, 10, 2 and 6% respectively.

<table>
<thead>
<tr>
<th>Table 4: Different Symptoms at Presentation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Itching</td>
</tr>
<tr>
<td>Hemorrhage</td>
</tr>
</tbody>
</table>

LSS is commonly involved around 74% and short saphenous around 18%. Left sided lesions constitute 50% and right-sided lesions constitute only 42%. Both LSS and SSS make around 8%.

<table>
<thead>
<tr>
<th>Table 5: Venous Segment Involvement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Side</td>
</tr>
<tr>
<td>Right</td>
</tr>
<tr>
<td>Right</td>
</tr>
<tr>
<td>Left</td>
</tr>
<tr>
<td>Left</td>
</tr>
<tr>
<td>Both</td>
</tr>
</tbody>
</table>
Sapheno-femoral incompetence constitutes the bulk of the disease 76% of the in my study group. Sapheno-popliteal incompetence occurs in 6% of the people. Below knee perforator incompetence occurs in 50%. Above knee perforator incompetence occurs in 30%. Lateral ankle perforator incompetence is least common only 8%
Trendelenburg with stripping constitutes 54% and sub facial ligation done in 27%. Trendelenburg procedure done in 12%. Hence, sapheno femoral junction ligation in 64%. Phlebectomy was done in 10% of cases and sapheno popliteal junction ligation done in 14% cases.

![FIG. 7: MODALITIES OF TREATMENT](image)

<table>
<thead>
<tr>
<th>TREATMENT</th>
<th>NO</th>
<th>PERCENTAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>TRENDENELBORG OPERATION</td>
<td>3</td>
<td>6%</td>
</tr>
<tr>
<td>TRENDENELBORG WITH STRIPPING</td>
<td>29</td>
<td>58%</td>
</tr>
<tr>
<td>TRENDENELBORG WITH SSG</td>
<td>1</td>
<td>2%</td>
</tr>
<tr>
<td>SUBFASCIAL LIGATION</td>
<td>9</td>
<td>18%</td>
</tr>
<tr>
<td>PHLEBECTOMY</td>
<td>5</td>
<td>10%</td>
</tr>
<tr>
<td>SAPHENOPOPLITEAL LIGATION</td>
<td>7</td>
<td>14%</td>
</tr>
<tr>
<td>COMPRESSION THERAPY</td>
<td>2</td>
<td>4%</td>
</tr>
<tr>
<td>SUPRAFACIAL LIGATION</td>
<td>1</td>
<td>2%</td>
</tr>
</tbody>
</table>

**TABLE 7: DIFFERENT MODALITY OF TREATMENT**

<table>
<thead>
<tr>
<th>COMPLICATION</th>
<th>NO</th>
<th>PERCENTAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>HYPERPIGMENTATION</td>
<td>13</td>
<td>26%</td>
</tr>
<tr>
<td>ECZEMA</td>
<td>8</td>
<td>16%</td>
</tr>
<tr>
<td>EDEMA</td>
<td>2</td>
<td>4%</td>
</tr>
<tr>
<td>LIPODERMATOSCLEROSIS</td>
<td>4</td>
<td>8%</td>
</tr>
<tr>
<td>HEALED ULCER</td>
<td>5</td>
<td>10%</td>
</tr>
<tr>
<td>OPEN ULCER</td>
<td>4</td>
<td>8%</td>
</tr>
</tbody>
</table>
Most common complication of varicose veins in my study was hyperpigmentation followed by eczema, ulceration and lipodermatosclerosis.

Lipodermatosclerosis was found in approx. 8% of the patients. Rare complication like cellulitis and haemorrhage were found to be in 2% patients.

Skin staining is the most common complication in 6 patients and recurrence in 1 patient. Haematoma is next common complication which occurred in 4 patients.
DURATION OF HOSPITAL STAY | NUMBER OF PATIENTS | PERCENTAGE
--- | --- | ---
<5DAYS | 3 | 6%
6-10 DAYS | 21 | 42%
11-15 DAYS | 18 | 36%
16-20 DAYS | 5 | 10%
>20 DAYS | 3 | 6%

40% of the patients stayed in hospital for about 6-10 days. 36% patients stayed for duration of about 11-15 days. 6% patients stayed less than 5 days. Another 16% patients stayed for duration more than 15 days. Minimum 4 days maximum 29 days is duration of hospital stay of patients.
DISCUSSION: The majority of patients were in the age group of 20-40 years (70%), i.e. young adults. Age distribution in most studies varied from 30-40 years. In the present study, 84% were males and only 16% females. But according to the literature, women are affected twice more often than men. This predominance of males in our study might be due to a male dominant society, with more males turning up for the treatment. The common clinical complaints were tiredness and aching sensations in the leg, ankle swelling and cosmetic appearance as reported in the literature. But a significant number of patients in our study were having symptoms of advanced disease like hyper pigmentation (26%), ulcer (18%), eczema (16%) and edema (4%). This was probably because these patients neglected their disease in the early stage.

Manual worker constitutes 28% of our study. Occupations like manual labourer, salesman, farmers, and security guards constitute around 36%.

Left sided lesions are common than right side. Long saphenous segment is more commonly involved than short saphenous segment. Both systems are involved in 10% of people. Sapheno-femoral incompetence is the most commonly observed pathology. Of the perforators below knee perforator is commonly involved and lateral perforator least.

Trendelenburg procedure with stripping is the most commonly done procedure. SSG is done only 2% with the above procedure.

Next commonly done procedure is sub facial ligation.

Skin staining is the common complication. Recurrence in 2% of people. Mean hospital stay is 11 days minimum and maximum – 29 days.

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BIBLIOGRAPHY:


AUTHORS:
1. Vijaykumar Huded
2. Sibaprasad Dash
3. S. K. Das
4. Subhabrata Das
5. Ramanarayan Sahu
6. Sulata Choudhury
7. Subrato Pramanik
8. Amesh Ku. Rajak

PARTICULARS OF CONTRIBUTORS:
1. Post Graduate Student, Department of General Surgery, MKCG, Medical College Hospital, Brahmapur, Odisha.
2. Associate Professor & Guide, Department of General Surgery, MKCG, Medical College Hospital, Brahmapur, Odisha.
3. Professor and HOD, Department of General Surgery, MKCG, Medical College Hospital, Brahmapur, Odisha.
4. Assistant Professor, Department of General Surgery, MKCG, Medical College Hospital, Brahmapur, Odisha.

5. Senior Resident, Department of General Surgery, MKCG, Medical College Hospital, Brahmapur, Odisha.
6. Assistant Professor, Department of Pathology,
7. Post Graduate Student, Department of General Surgery, MKCG, Medical College Hospital, Brahmapur, Odisha.
8. Post Graduate Student, Department of General Surgery, MKCG, Medical College Hospital, Brahmapur, Odisha.

NAME ADDRESS EMAIL ID OF THE CORRESPONDING AUTHOR:
Dr. Vijaykumar Huded,
PG-2 Hostel, Room – 61,
MKCG, Medical College,
Brahmapur – 760004, Odisha.
E-mail: drvijayh21@gmail.com

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