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Clinical features and socio-demography of varicose veins of lower limbs

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Abstract
Background: Varicose veins and their associated symptoms and complications constitute the most common chronic vascular disorders leading to surgical treatment.
Objective: to study the clinical features and socio-demography of varicose veins of lower limbs.
Setting: This was a prospective study involving 40 patients who presented with signs and symptoms of primary varicose veins to CG hospital and Bapuji hospital attached to J.J.M. Medical College, Davangere during June 2009 to May 2011.
Result: The commonest age group of over patients was between 31 to 40 yrs (27.5 %.). 33 were male and 07 were female. Right limb was more affected 19 cases (47.5%) than left limb 17 cases (42.5%). In 4 of the cases (10%), both the limbs were involved. 5 patients had family history of similar complaints (12.5%). Our patients presented with varied symptoms, out of which dilated veins was most common 37 (92.5%) patients followed by aching pain 22 patients (55%). Long saphenous system is the most common venous system affected by varicosity (64.7%). A greater portion of the patients had combined valvular incompetence (60%). The most common was the above ankle group with 24 followed by below knee with 21 cases.
Conclusion: It was concluded that varicosity of the lower limb is a fairly common clinical entity. Disease is prevalent in the young adult and middle aged individuals (21-40 years). The most common presenting symptom was dilated veins followed by aching pain.

Keywords: Varicose veins, saphenous system, lower limb, clinical features, socio-demography

Introduction
Varicosity is the penalty for verticality against gravity" [1] The term "Varicose" is derived from the Latin "Varix" (pleural "Varices") which in turn possibly derived from 'varus' meaning bent. Physiologically speaking a varicose vein is one which permits reverse flow through its faulty valves [2]. Varicose veins are defined by World Health Organization as abnormally dilated saccular or cylindrical superficial veins, which can be circumscribed or segmental. This includes tiny spider telangiectasias as well as grossly dilated saphenous varicosities [3].
Varicose veins have been recognized as chronic disorder since ancient times. Hippocrates discussed them 2500 years ago. It involves at least 1 out of 5 in the world and with increasing population, increased life span and change in life style; the problem is ever growing. Though varicose veins were recognized pre historically only in the present century considerable knowledge has been gained concerning the anatomy of venous system of the leg, the physiological mechanism of venous return to heart against gravity and pathology of the disorder, which has lead to many newer modalities of treatment. It is in the developed countries where attire reveals more than it conceals; patients turn up for treatment of cosmetic reasons. In our Indian scenario it is the complications not the cosmetic reasons bring the patient to the doctor. That is the reason, why, though common, varicose veins remain as an iceberg phenomenon. Hence the present study was undertaken to study to study the clinical features and socio-demography of varicose veins of lower limbs.

Materials & Methods: This was a prospective study involving 40 patients who presented with signs and symptoms of primary varicose veins to CG hospital and Bapuji hospital attached to J.J.M. Medical College, Davangere during June 2009 to May 2011.

Inclusion criteria

1. All patients with primary varicose veins of lower limb due to superficial & perforator venous incompetence.
2. Those presenting with complications like chronic swelling, skin changes (lipodermatosclerosis, eczema, pigmentation etc) and venous ulceration.
3. Post-operative cases of varicose veins presenting with complications.

Exclusion criteria

1. Secondary varicose veins.
2. Varicose veins associated with deep vein thrombosis.

Study design

All patients who presented to our outpatient department with signs & symptoms of primary varicose veins were interviewed with preformed proforma, meticulously examined and later subjected to Color Doppler studies before they underwent surgery for the same. The patients underwent treatment based on their clinical and investigational profile. The post-operative course was noted. Further the patients were followed up on 1st and 3rd month. If necessary, repeat investigation (Duplex USG) was done. Final outcome was evaluated. All the information was taken down in the proforma, designed for the study. Important data pertaining to each case is shown in the master chart.

Result: 40 patients with primary varicose veins who were treated in CG Hospital and Bapuji Hospital attached to J.J.M Medical College, during June 2009 to May 2005 were included in the study.

The age of these patients ranged from 13yrs to 70 yrs. The commonest age group of over patients was between 31 to 40 yrs (27.5 %.)

Table 1: Age distribution

Age groups (years)	No. of cases	Percentage
10-20	03	7.5
21-30	09	22.5
31-40	11	27.5
41-50	06	15
51-60	05	12.5
>60	06	15

Out of 40 patients, 33 were male and 07 were female

Table 2: Sex distribution

Gender	No. of cases	Percentage
Male	33	82.5
Female	07	17.5
Total	40	100

Right limb was more affected 19 cases (47.5%) than left limb 17 cases (42.5%). In 4 of the cases (10%), both the limbs were involved. 5 patients had family history of similar complaints (12.5%).

Table 3: Side affected

Side	No. of cases	Percentage
Right	19	47.5
Left	17	42.5
Both limbs	04	10
Total	40	100

Our patients presented with varied symptoms, out of which dilated veins was most common 37 (92.5%) patients followed by aching pain 22 patients (55%).

Table 4: Symptomatology

Symptoms	No. of cases	Percentage
Pain	22	55
Dilated vein	37	92.5
Limb edema	11	27.5
Ulcer	05	12.5
Others (Skin changes etc.)	13	32.5

Long saphenous system is the most common venous system affected by varicosity (64.7%). Both the long and short saphenous system is affected in 26.48 % of the cases.

Table 5: Venous system involved

System involved	No. of cases	Percentage
Long saphenous system	22	64.70
Short saphenous system	03	08.82
Both systems	09	26.48

A greater portion of the patients had combined valvular incompetence (60%). Isolated perforator incompetence was seen in 15% of the patients.

Table 6: Site of incompetence

Site of incompetence	No. of patients limbs	Percentage
Saphenofemoral	10	25
Saphenofemoral + Perforator	12	30
Saphenofemoral + Saphenopopliteal + Perforator	07	17.5
Saphenopopliteal + Perforator	03	07.5
Saphenofemoral + Saphenopopliteal	02	05
Perforator	06	15
Total	40	100

The most common was the above ankle group with 24 followed by below knee with 21 cases.

Table 7: Perforator incompetence

Perforators	No. of cases
Thigh	15
Below knee	21
Above ankle	24
Unnamed	05

Discussion: In the presents study a total number of 40 patients with primary varicose veins were admitted, investigated, operated and followed up. The results were analyzed. The analysis is as:

In my study the age range is from 13 yrs to 70 yrs. Malhotra *et al.* [4] (1972) in their study comprising 677 patients from both North and South India had an age range of 18-65 years. In the West Wright *et al.* [5] in their study of 1338 patients in England had an age range of 20-75 years. Also in my study, maximum number of patients 11 (27.5%) presented in the age group of 31-40 years. This age distribution correlates well with other studies conducted by W.B.Campbell *et al.* [6] who showed the commonest age at presentation to be 30-40 years.

In my series male to female ratio was found to be 4.7:1. Malhotra *et al.* [4] (India) did not record a single case of female patients. Burkitt *et al.* [7] (India) showed a ratio of 1.5:1. Compared to these observations Mekky *et al.* [8] (Egypt& England 1969) did not record even a single case of Male having

varicose veins. Leipnitz *et al*. [9] in Germany recorded a ratio of 1:2. Widmer[10] in Switzerland recorded a ration of 1:1.
The decreased occurrence of disease in females at our set up may be due to the fact that our middle class and lower class women are not much worried about the cosmetic appearance. Secondly the women may be resistant to complications of varicose veins probably due to? Hormonal influence or less average height compared to male which has a direct impact on venous hypertension or less violent muscular activity.

Family history
A 12.5% (5 cases) familial incidence was noted in this series. De Takata [11] in his series had shown that nearly 50 to 70% of the patients with varicose veins had a hereditary tendency, but this series showed a very low incidence.

Limb involved
In present study right and left limb involvement is 52.77% and 47.22% respectively, which was compared with study conducted by A.H.M. Dur, A.J.C. Mackaay *et al*. [12], in which right and left limb accounted respectively for 48.55% and 51.45%. Both limbs involvement in this study were seen in 4 patients.

Symptomatology
In the present study, the commonest symptom in 37 (92.5%) cases was that of dilated and tortuous veins. 22 (55%) cases had complaints of pain in the affected limb and 11(27.5%) cases had limb edema, venous ulcer was present in 5 (12.5%) of cases. This findings correlate well with other studies done by W.B. Campbell *et al*. [6], with cosmetic symptoms being 90% and aching pain 57%.

Venous system involved
In this series, long saphenous vein was involved in 64% of cases (22 patients), the short saphenous vein in 8.82% (3 patients) and both long and short in 26.48% (9 cases). Delbe and Mocquet in their study had found varicosity of long saphenous vein in 98% and only 2% in short saphenous vein. Incompetent perforator was noted in 41 (82%) cases.

Site of incompetence and complications:
In my study 14 patients had complicated varicose veins (class 3 and above). 10 (71.42%) had combined superficial and perforator incompetence, 2 (14.28%) patients each had isolated superficial incompetence and isolated perforator incompetence.
In a similar study by T.A. Lees & D. Lambert [13] (60 patients with skin changes), 39 (65%) had combined superficial and perforator incompetence, 17(28.33%) had isolated superficial incompetence and 2 (3.33%) had isolated perforator incompetence.

Incompetent perforator
In my study over all 70% of patients had perforator incompetence which shows that majority of the cases presenting to the hospital for treatment are advanced cases of hemodynamic disturbances of the limb and it is comparable with study conducted by Labropoulos N *et al*. [14] where 68% had perforator incompetence.

Conclusion: It was concluded that varicosity of the lower limb is a fairly common clinical entity. The study revealed that the disease is prevalent in the young adult and middle aged individuals (21-40 years) who are the earning members of the society. The majority of the patients were male. The study also revealed slightly increased incidence of varicosity in the right lower limb as compared to left lower limb. The most common presenting symptom was dilated veins followed by aching pain. A greater portion of the patients had combined valvular incompetence with advanced hemodynamic disturbances at presentation.

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References
1. Shenoy KR. Varicose veins, Deep vein thrombosis: Manipal manual of surgery. 2nd ed. New Delhi: CBS Publishers & Distributors 2005,90-100.
2. Kevin Burnand. Venous disorders. Norman SW, Christopher JKB, P Ronan O' Connell, editors. Bailey and Love's Short practice of surgery, 25th ed. London: Hodder Arnold 2008,925-943.
3. William AM, George JJ. Varicose veins & superficial thrombophlebitis. Richard HD, James STY, David CB, editors. Current diagnosis & treatment in vascular surgery. 1st ed. Connecticut: Appleton and Lange; 1995. p. 351-364.
4. Malhotra SL. An Epidemiological study of varicose veins in Indian rail road workers from the South and North of India, with special reference to the causation and prevention of Varicose veins. Int. J Epidemiol 1972;1(2):177-83.
5. Wright *et al*. The prevalence of venous disease in a west London population. In: Davy A, stemmer R, editors. Phlebology 89. Paris: John libbey Eurotext 1989,176-8.
6. Campbell WB, Halim AS, Aertssen A *et al*. The place of duplex scanning for varicose veins and common venous problems. Ann R Coll Surg Engl 1996;78(6):490-493.
7. Burkitt *et al*. Varicose veins in India. Lancet 1975;2:765-769.
8. Mekky *et al*. Varicose veins in women cotton workers: An epidemiological study in England and Egypt. BMJ 1969;2(5657):591-5.
9. Leipnitz *et al*. Prevalence of venous disease in the population: first results from a prospective study carried out in greater Aachen In: Davy A, Stemmer R, editors, Phlebology'89. Paris: John libbey Eurotext 1989,169-71.
10. Widmer LK. Peripheral venous disorders. Basal III, Bern: Hans Huber 1978.
11. De Takatas G. Varicose veins and their sequelae. JAMA 929:92:775779.
12. Dur AHM, Mackay AJC *et al*. Duplex assessment of clinically diagnosed chronic venous Insufficiency. Br. J. surg 1992;S(79):155-161.
13. Lees TA, Diltiazem Lambert. Patterns of venous reflux in limbs with skin changes associated with chronic venous insufficiency. Br J Surg 1993;80(6):725-28.
14. Labropoulos N. *et al*. Where does venous reflux start? J Vasc surg 1997;26(5):736-42.