

Higher Prevalence of Varicose Veins in Pregnant Women

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Abstract: Varicose veins are dilated, often palpable subcutaneous veins with reversed blood flow, most commonly found in the legs. Varicose veins have become a serious and painful disease and affecting the lives of millions of people across the globe and is said to be ignored by people living across India. Environmental factors such as food, occupation, life style and pregnancy are known to influence the development of varicose veins. The establishment of the cause of varicose veins is essential for prognosis, management, and understanding the cause of varicose. One hundred thirty women having vascular disorder were studied to analyse risk factors varicose veins. The results were statistically analyzed. Prevalence of varicose disease was 68.46% in which 75 were pregnant women. Multivariate analysis among various factors showed significant values for family history and pregnancy. Previous pregnancies also played a role in increased prevalence of varicose veins in women. The high prevalence of varicose disease in pregnant women suggests the need of providing proper health care professionals having information on this disease during pregnancy.

Keywords: Disease, Pregnancy, Varicose veins, Vascular disorder and veins.

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I. Introduction

Varicose veins (VV) is a frequently occurring disorder with a major impact on the life of the affected person and their family members. Varicose veins is present in about 10-15% of individuals in the general population of India [1]. But it can only be explained in about half of the cases. Despite of break thorough in clinical and laboratory investigations a significant challenge still exists to identify the causes of varicose veins.

It has been known for many years that women had a higher risk of developing varicose veins. This was often explained by the fact that women carry children, or explained that women just have “weaker veins” than men do. But there is a hormonal explanation for why women develop varicose veins more frequently than men do. Women are more likely at risk as a result of fluctuations in hormones. There are physiologic states, such as pregnancy, menopause and iatrogenic states, in which the level of female hormones in the circulation is far from normal and those states have been associated with varicose veins. In the present study female patients of varicose veins were screened with reliable and valid tools for identifying the etiology of varicose veins. The various factors including pregnancy, life style, body mass index and familial factors were examined and studied in these patients. Separate evaluation of risk factors was done with the help of multivariate analyses and logistic regression.

II. Methodology

Present study was conducted on 130 women from the Pandit Bhagwat Dayal Sharma University of Health Sciences, Rohtak. A written informed consent was obtained from patients, study was approved by Institutional Human Ethical Committee. Diagnosis of patients done with the help of clinicians and based on the definition given in the questionnaire. Patients visited the vascular surgery unit and gynecology ward of PGIMS Rohtak and were examined by a surgeon. Examination of varicose veins women included the inspection of lower extremists and tests with Doppler reflux verification. Diagnostic investigations used to evaluate the aetiology of varicose veins information on age, sex, life style, and risk factors were noted. Patients were subjected to Morphologic analysis including physical examination focused on the detection of veins features. Results were statistically analysed to know the role various risk factors and to find out the etiopathogenesis of varicose veins.

III. Results

One hundred thirty women were investigated in present study. Out of these 89 women had varicose veins. Patients of varicose veins were identified with the help of clinician and selected for further analysis. This study has observed a higher prevalence of varicose disease in female patients who had more than two pregnancies in comparison to nulliparae i.e 50.56% (Fig. 1). Out of 89 women with varicose veins disease, there were 14 (16.27%) nulli pare, 13 (14.60%) primipare, 17 (19.10%) secundipare, and rest 45 (50.56%) had three or more pregnancies.

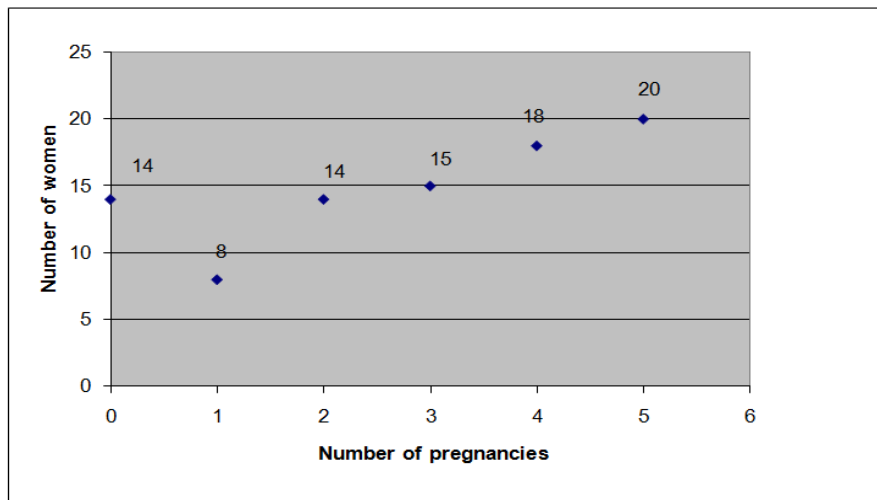


Figure 1- Women with varicose veins and number of pregnancies.

Separate evaluations of risk factors were made. For multivariate evaluation of risk factors, logistic regression enforcing every factor of interest was used to ensure maximal adjustment for potentially confounding variables. Various risk factors for varicose veins are evaluated in (Table1). In women, height, body mass index and number of pregnancies were positively associated with the presence of varicose veins ($p= 0.006$, 0.007 and < 0.001 respectively). Lack of sufficient routine exercise ($p= 0.77$) and long time sitting $p= 0.062$) were associated with very low risk of varicose veins. In women, pregnancy had shown high positive association with the presence of varicose veins ($p < 0.0001$) as compared to normal women (Table 1 Significant association was found between number of pregnancies and development of varicose veins of lower limb ($p<.001$).

Table 1: Distribution of risk factors of varicose veins among men and women.

Women Risk factors in women	Varicose veins		OR	95% CI	P
	Distribution + (n=89)	- (n=62)			
≥ 1 Pregnancies	69.6	43.5	2.9767	1.514 to 5.892	< 0.001
Prolonged standing	57.3	27.4	3.5526	1.670 to 7.142	< 0.0004
Prolonged sitting	34.8	37.0	0.9063	0.461 to 1.780	0.77
Height > 1.65 m	48.3	25.8	2.6875	1.328 to 5.436	0.006
Body mass index > 23 kg/m ²	68.5	46.7	2.4791	1.268 to 4.890	0.007
History of venous disease	57.3	30.6	3.0374	1.532 to 6.019	< 0.001

IV. Discussion

The term, varicose veins commonly refers to the veins in the leg, although these can occur in any other part of body. These are most common in the superficial veins of the legs, which are subject to high pressure when standing. Environmental and lifestyle factors affect the prevalence of varicose veins disease. Pregnancy in women also affects the development of varicose veins and is likely a major reason why the prevalence of varicose veins is twice as high in women as in men [2, 3, 4, 5 and 6]. Many studies have shown that Pregnancy is an important risk factor in the development of varicose disease in women [3, 4, 5, 6, 7, and 8]. Parity is defined as the number of births. Women were classified into four groups according the number of births; 0, 1, 2 and 3 or more. The majority of earlier prevalence studies have found a risk between varicose veins and parity [9, 10,11, 12 and 13]. Other studies reported already one pregnancy to increase the risk for developing varicose [14, 15, 16 and 17], whereas in the some other studies more than one delivery had a significant influence [18 and 19]. In Tampere varicose veins study, parity was independently associated with increased risk of varicose veins [20 and 21]. A minority of the prevalence studies did not find a significant association between the prevalence of varicose veins and [22, 23,24 and 25]. In the present study significant association of varicose disease and pregnancy has been observed. However, the present study has found significant increase of varicose veins in

pregnant women. This high prevalence may be caused by the increase in the estrogen and progesterone levels during pregnancy [26]. Prevention is always better than cure, it is important to understand how varicose veins develop and how they can be prevented during pregnancy. Better understanding of the condition will be helpful in identifying the early development of disorder and recurrence of disease after delivery. It is essential for all women be aware of their cardiovascular health when reaching pregnancy stage in order prevent or even avoid varicose veins and any other potential complications arising from this disease. The present information give an insight to prevent the varicose vein disorder in early stage during pregnancy. Eventually symptoms and suffering from the disease can be prevented by early intervention and taking precaution as per advice of clinician.

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