The Professional Medical Journal
www.theprofesional.com

ORIGINAL PROF-2328

VARICOSE VEINS;
OUTCOME OF SURGICAL MANAGEMENT AND RECURRENCES

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Article received on:
21/08/2013
Accepted for Publication:
30/03/2014
Received after proof reading:
28/05/2014

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ABSTRACT… Objective: The objective of this study is to evaluate the outcome of the surgical management including the surgical techniques (ligation and stripping, phlebectomy) and recurrence of varicose veins. **Study design:** Observational study. **Setting:** Study was conducted at the unit of general surgical of Liaquat University Hospital. **Study period:** One year from February 2011 to February 2012. **Materials and methods:** This study was contains 40 patients of varicose veins who were undergone surgery. The routine investigations were done. The patients underwent suitable treatment based on their clinical and investigational profile. The post operative course was noted. Further the patients were followed up and final outcome evaluated. **Results:** From all of 40 cases females were more found in this study as compare to men and mostly patients were found in the age group of 41 to 60 and the second most common age group was 21-40. From the postoperative complications wound infection was noted in the majority of the cases 17.5%. 2 patient had recurrence of varicose veins i.e. 5.0%. **Conclusions:** Varicose vein surgery is safe, acceptable and cost effective as a day case or ambulatory surgical procedure. Preoperative selection of the patients is mandatory to achieve optimal results. Surgical techniques, (ligation and stripping, phlebectomy) has given good results at our Hospital.

Key words: Varicose veins, surgical management, recurrence.

Article Citation: Das K, Ahmed S, Abro S, Arain MS. Vericose veins; outcome of surgical management and recurrences. Professional Med J 2014;21(3): 509-513.

INTRODUCTION

Varicose veins are tortuous, widened veins in the subcutaneous tissues of the legs and are often easily visible. Their valves are usually incompetent so that reflux of blood occurs, and the resulting venous hypertension can cause symptoms. Varicose veins are widely seen as medically unimportant and deserving low priority for treatment. They are common, affecting nearly a third of adults in Western societies, and few people with varicose veins are ever harmed by them[1]. Varicose veins are the common early manifestation of "chronic venous disorders" and an important cause of morbidity and escalating health care costs in industrialized Western societies. It has been estimated that the treatment of patients with "chronic venous disease" accounts for approximately 2 to 2.6% of the total health care budget in the United States, France, and the United Kingdom annually[2,3]. Varicose veins are occur in 20 to 25% of adult females and 10 to 15% of men in western countries[4]. Prevalence of varicose veins varies substantially in different parts of the world, being highest in the western world; mostly from (10% to 30%) in men and from (25% to 55%) in women in population on studies based[5,6]. In population in middle to late adulthood "40 to 69 years" the prevalence of varicose veins ranged from 9 to 19 per 1,000 person-years in men and from 19 to 26 per 1,000 person years in women in follow-up studies from Finland and the USA[7]. The etiology of "varicose veins" is still incompletely understood despite the fact that it is a very common disease affecting all ages from teenagers to elderly people.

In a population based study, Carpentier found that a history of varicose veins in first degree relatives

and age were among the two most important risk factors for varicose veins in both sexes. Varicose veins occur more commonly in women than in men and increase in severity with each successive pregnancy. The physiologic hemodynamic and hormonal changes associated with pregnancy increase venous relaxation and capacitance, which contribute to the development of varicose veins[8]. "Surgical treatment" of varicose veins includes high ligation and saphenous vein stripping, with or without phlebectomy; until the past few years, this techniques had been used very commonly by surgeons worldwide[9,10].

Recurrent varicose veins after surgical treatment are a serious problem, and many patients require additional interventions. Surgery for recurrence represents a considerable proportion of the workload of surgeons operating on varicose veins. The operations are technically more demanding and complicated than first time operations. Recurrent varicose veins after surgery (REVAS) have been reported at rates ranging from 6.6% to 37% at 2 years[11,12] and up to 51% at 5 years[13]. Most studies reported 2-year clinical recurrence rates of 20% to 37% after conventional or cryostripping, when residual or recurrent varicose veins noted by both the patient and the surgeon were counted[13]. The purpose of this was to evaluate the outcome of the surgical treatment including the surgical techniques (ligation and stripping, phlebectomy) and reoccurrence of varicose veins.

METHOD AND MATERIALS

This Descriptive & observational study was contain 40 patients of varicose veins, was conducted in the unit of general surgery of Liaquat University Hospital from February 2011 to 2012. All patients with varicose veins presented to the Liaquat University Hospital. Informed consent was taken from every patient. The data were recorded on a pre designed Performa. All the patients diagnosed as having varicose veins by the surgeon and referred to the department of radiology for duplex scan were studied. A detailed clinical examination was done. All the clinical tests were applied to arrive at a probable diagnosis. Then the patients were subjected to duplex ultrasonography to confirm the diagnosis. The routine investigations were also done. The patients underwent suitable treatment based on their clinical and investigational profile. The post operative course was noted. Further the patients were followed up and final outcome evaluated. All the patients with symptomatic varicose veins and with complications disease such as pigmentation, eczema, ulceration, superficial thrombophlebitis, etc were included in the study. All the patients with deep venous thrombosis (DVT), pregnancy, Intra abdominal malignancy and patients with other co morbidities. Like uncontrolled diabetes mellitus, myocardial infarction and congenital disease were excluded from the study. The data were evaluated in statistical package for social sciences SPSS version 16.0. Qualitative data (frequency and percentage) such as age (in groups), gender, limb involvement, family history, preoperative complications, post operative complications, outcome etc. were presented as n(%). Quantitative data (numerical variables) i.e. age (in years) etc. were expressed as in the yeas and age groups.

RESULTS

All of the 40 cases with varicose veins of the legs who were admitted investigated in the ward of surgery and underwent surgery followed by inclusion and exclusion criteria. Females were more found in this study as compare to men and mostly patients were found in the age group of 41 to 60 and the second most common age group was between 21 t0 40 years of the age, according to occupational status majority of the cases seen in the prolonged standing workers, farmers were found 22.5% of the cases, Cooks 15% , house wife 20%, laborer 17.5%, teacher 07.5% and others (many work performer were found 17.5% all of the cases, left limb involvement was seen in the majority of the cases with the percentage 0f 45%, while right limb and bilateral limbs involvement cases were seen 35% and 20% respectively. Table-I.

In this study majority of cases were underwent in "ligation and stripping" techniques of the surgery 75%, while 25% of the cases were underwent of "phlebectomy" technique. Fig-1.

Characteristics	Frequency	%age
Age groups		
<20	-	-
21-40	16	40.0%
41-60	20	50.0%
60-80	04	10.0%
Gender		
Male	18	
Female	22	
Occupational status		
Farmer	09	22.5%
Cooks	06	15.0%
House Wife	08	20.0%
Laborer	07	17.5%
Teacher	03	07.5%
Others (many work performer)	07	17.5%
Limb evolvement		
Right	14	35.0%
Left	18	45.0%
Bilateral	08	20.0%

Table-I. Basic presenting features of the cases (n=40)

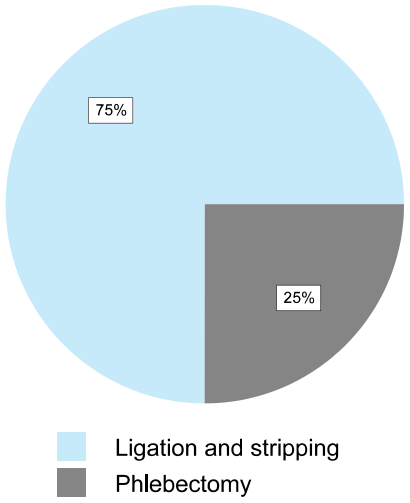

Fig-1. Cases were underwent surgical technique

In this study from the postoperative complications wound infection was noted in the majority of the cases 17.5% while hematoma, cellulitis transient numbness or tingling of legs and saphenous nerve were found with the percentage 05.0%, 07.5%, 02.5% and 02.5% respectively. Table-II.

From all of the cases only 5% were comes back with the recurrences of the varicose veins. Table-II

Outcome	Frequency	%age
Postoperative complications		
Hematoma	02	05.0%
Wound infection	07	17.5%
Cellulitis	03	07.5%
Transient numbness or tingling of leg	01	02.5%
Saphenous nerve	01	02.5%
Recurrences		
Under six months of surgery	-	-
After six months of surgery	02	05.0%

Table-II. Surgical outcome fellows to postoperative complications and recurrences

DISCUSSION

Varicose vein is the most common surgical problem. The prevalence of varicose veins varies among different populations. This situation is considered as “national health problem” in the countries western. Incidence of varicose veins is 10 to 15% in men & 20 to 25% in the women[14]. No statistical data of varicose veins in Pakistan is available but incidence in Pakistan is on the rise. This could be because of environmental factors and life style changes.

In the present study females were more found as compare to men and mostly patients were found in the age group of 41 to 60 and the second most common age group was between 21 t0 40 years of the age, which is comparable well with study done by Mirji P et al[15] who showed 62.5% patients in the age group 20 to 40 years. Lateef et al[16] showed 65%, these results are similar to this study.

According to occupational status majority of the cases seen in the prolonged standing workers, farmers were found 22.5% of the cases, Cooks 15% , house wife 20%, laborer 17%, teacher 07.5% and others (many work performer were found 17.5% all of the cases, Similar results were seen in the study of Pramod Mirji et al, in his study farmer and house wife’s were affected in majority[17]. Similar results were seen in the many other studies[18,19,20]. Ziegler et al, was reported that from “209” workers of the hospital, (34%) with chronic

venous diseases were standing longer at work than their colleagues who were free of chronic venous disease, the ratio being 1.6 for men and 1.2 for women[21,22].

Left limb involvement was seen in the majority of the cases with the percentage 0f 45%, while right limb and bilateral limbs involvement cases were seen 35% and 20% respectively, these results are comparable with the study of Fanilda Souto Barros et al, he reported that cases were effected with varicose veins at right side 37.8%, left side effecting patients 41.7% and the bilateral varicose veins were in the 45.2% of the cases[23].

Varicose vein recurrence is very common following conventional great saphenous vein "GSV" surgery, occurring in 13-29% of patients[24]. About twenty percent of interventions for varicose veins are for recurrent varicosities after surgery[25]. In this study, all the 40 patients that had undergone varicose vein surgery, 24 reported back for follow up of upto 12-18 months. 2 patient had recurrence of varicose veins i.e. 5.0%. Approximately 20% of varicose vein operations are performed for recurrent varicosities[26]. Maeseneer et al, have shown that neovascularisation rates at 1 year predict the development of clinical recurrence at 5 years[27].

CONCLUSIONS

Varicose vein surgery is safe, acceptable and cost effective as a day case or ambulatory surgical procedure. Preoperative selection of the patients is mandatory to achieve optimal results. Surgical techniques, (ligation and stripping, phlebectomy) has given good results at our Hospital.

ACKNOWLEDGMENT

Authors acknowledge Dr. Muhammad Saeed Arain for their statistical analysis and other technical help according to guidelines.

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The aim of the wise is
not to secure pleasure,
but to avoid pain.

Aristotle