Original Research Article

Assessment of post operative complications in the patients operated for leg varicose veins in a tertiary health care centre

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Abstract

Background: Varicose vein the most commonly encountered conditions is nothing but abnormally dilated, tortuous, elongated, friable superficial veins, usually of lower limbs. **Aims and Objectives:** To study post operative complications in the patients operated for leg varicose veins in a tertiary health care centre. **Methodology:** After approval from institutional ethical committee this cross-sectional study was carried out in the department of General surgery of a tertiary health care centre during the one year period i.e. March 2017 to March 2018, during the one year period there were those patients who were operated for the varicose vein of leg was included into the study, so there were 81 patients were operated, included into the study. All necessary details of the patients like age, sex, any minor or major complications in the follow up visits were assessed. The data was analyzed by Excel sheets for windows 10. **Result:** In our study the overall post operative complication were 32.10% out of that the minor were 20% out of that the most common were ;Wound infection in 8.64%, followed by Neurasthesia-6.17%, Lymphoedema in 3.70%, Superficial thrombo-phlebitis in 2.47%, Blister of ankle, foot ulcer, Chest infection in 1.23%. The major complications were 7.41 % out of that the most common were Nerve injury - 2.47%, DVT only, Major vessel injury, DVT with PE were 1.23%. **Conclusion:** It can be concluded from our study that the most common complication were minor i.e. Wound infection, Neurasthesia, Lymphoedema, Superficial thrombo-phlebitis etc. and the major complication were Nerve injury, DVT only, Major vessel injury, DVT with PE.

Key Words: Varicose veins, DVT (Deep Venous Thrombosis), PE (Pulmonary Embolism).

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INTRODUCTION

Varicose vein the most commonly encountered conditions is nothing but abnormally dilated, tortuous, elongated, friable superficial veins, usually of lower limbs. The main mechanism for this condition that, varicose veins have permanently lost their valvular efficiency so that the blood accumulates in the vein giving it the Tortuous appearance.[1] This condition is most common after age 50.[2] It is more prevalent in females. There is a hereditary role. It has been seen in smokers, those who have chronic constipation and in people with occupations which necessitate long periods of standing such as lecturers, nurses, conductors (musical and bus), stage actors, umpires (cricket, javelin, etc.), the Queen's guard, lectern orators, security guards, etc.[3] It can be managed by conservative way but in the severe cases it need surgical interventions but these are not free from complications so we have studied the complications in the patients who have operated for varicose vein in leg at tertiary health care centre.

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MATERIAL AND METHODS

After approval from institutional ethical committee this cross-sectional study was carried out in the department of General surgery of a tertiary health care centre during the one year period i.e. March 2017 to March 2018, during the one year period there were those patients who were operated for the varicose vein of leg was included into the study, so there were 81 patients were operated, included into the study. All necessary details of the patients like age, sex, any minor or major complications in the follow up visits were assessed. The data was analyzed by Excel sheets for windows 10.

RESULTS

Table 1: Distribution of the patients as per the Age

Age	No.	Percentage (%)
20-30	3	3.70
30-40	9	11.11
40-50	13	16.05
50-60	17	20.99
60-70	21	25.93
70-80	11	13.58
>80	7	8.64
Total	**81**	**100.00**

The majority of the patients were in the age group of 60-70 i.e. 25.93% followed by 50-60 were 20.93%, 40-50 - 16.05%, 70-80 – 13.58%, 30-40 were 11.11%, >80 were 8.64%, 20-30 were 3.70%.

Table 2: Distribution of the patients as per the sex

Sex	No.	Percentage (%)
Male	30	37.04
Female	51	62.96
Total	**81**	**100.00**

The majority of the patients were Female i.e. 62.96% and Male were 37.04%

Table 3: Distribution of the patients as per the minor complications

Complications	No.	Percentage (%)
Wound infection	7	8.64
Neurasthesia	5	6.17
Lymphoedema	3	3.70
Superficial thrombo-phlebitis	2	2.47
Blister of ankle	1	1.23
foot ulcer	1	1.23
Chest infection	1	1.23
Total	**20**	**24.69**

Overall the minor complications were 20% out of that the most common were ;Wound infection in 8.64%, followed by Neurasthesia -6.17%, Lymphoedema in 3.70%, Superficial thrombo-phlebitis in 2.47%, Blister of ankle, foot ulcer, Chest infection in 1.23%.

Table 4: Distribution of the patients as per the major complications

Complications	No.	Percentage (%)
Nerve injury	2	2.47
Major vessel injury	1	1.23
DVT only	1	1.23
Major vessel injury	1	1.23
DVT with PE	1	1.23
Total	**6**	**11.11**

Overall the major complications were 7.41 % out of that the most common were Nerve injury - 2.47%, Major vessel injury, DVT only, Major vessel injury, DVT with PE were 1.23%.

DISCUSSION

Varicose veins are more common in women than in men and are linked with heredity[4]. Other related factors are pregnancy, obesity, menopause, aging, prolonged standing, leg injury and abdominal straining. Varicose veins are unlikely to be caused by crossing the legs or ankles.[5] Less commonly, but not exceptionally, varicose veins can be due to other causes, as post-phlebitic obstruction or incontinence, venous and arteriovenous malformations.[6] It is often caused by venous reflux. More recent research has shown the importance of pelvic vein reflux (PVR) in the development of varicose veins. Hobbs showed varicose veins in the legs could be due to ovarian vein reflux[7] and Lumley and his team showed recurrent varicose veins could be due to ovarian vein reflux.[8] Whiteley and his team reported that both ovarian and internal iliac vein reflux causes leg varicose veins and that this condition affects 14% of women with varicose veins or 20% of women who have had vaginal delivery and have leg varicose veins.[9] In addition, evidence suggests that failing to look for, and treat pelvic vein reflux can be a cause of recurrent varicose veins.[10] There is increasing evidence for the role of incompetent perforator veins (or "perforators") in the formation of varicose veins.[11] and recurrent varicose veins.[12] Varicose veins could also be caused by hyperhomocysteinemia in the body, which can degrade and inhibit the formation of the three main structural components of the artery: collagen, elastin and the proteoglycans. Homocysteine permanentlydegrades c ysteine disulfide bridges and lysine amino acid residues in proteins, gradually affecting function and structure. Simply put, homocysteine is a 'corrosive' of long-living proteins, i.e. collagen or elastin, or lifelong proteins, i.e. fibrillin. These long-term effects are difficult to establish in clinical trials focusing on groups with existing artery decline. Klippel–Trenaunay syndrome and Parkes–Weber syndrome are relevant for differential diagnosis. Another cause is chronic

alcohol consumption due to the vasodilatation side effect in relation to gravity and blood viscosity.[13] Treatment can be either conservative or active. Active treatments can be divided into surgical and non-surgical treatments. Newer methods including endovenous laser treatment, radiofrequency ablation and foam sclerotherapy appear to work as well as surgery for varices of the greater saphenous vein.[14]

Surgical: A number of options are available from saphenous stripping to phlebectomy and chiva. Stripping: stripping consists of removal of all or part the saphenous vein (great/long or lesser/short) main trunk. The complications include deep vein thrombosis (5.3%),[24] pulmonary embolism (0.06%), and wound complications including infection (2.2%). There is evidence for the great saphenous vein regrowing after stripping.[25] for traditional surgery, reported recurrence rates, which have been tracked for 10 years, range from 5–60%. In addition, since stripping removes the saphenous main trunks, they are no longer available for use as venous bypass grafts in the future (coronary or leg artery vital disease).[26] chiva : there is tentative evidence that conservative hemodynamic correction of venous insufficiency method (chiva) which works to save the veins, decreases varicose veins and is safer than vein stripping in those with chronic venous insufficiency[27] In our study the overall post operative complication were 32.10% out of that the minor were 20% out of that the most common were ;Wound infection in 8.64%, followed by Neurasthesia -6.17%, Lymphoedema in 3.70%, Superficial thrombo-phlebitis in 2.47%, Blister of ankle, foot ulcer, Chest infection in 1.23%. The major complications were 7.41 % out of that the most common were Nerve injury - 2.47%, Major vessel injury, DVT only, Major vessel injury, DVT with PE were 1.23%. The minor complications in our study are comparable with the G Critchley[15] *et al* i.e. they found Minor complications occurred in 17% of patients; Wound complications (haematoma, cellulitis or abscess) occurred in 2.8% of limbs and minor neurological disturbance (numbness or tingling) in 6.6%. Leakage of lymph from the groin occurred in five patients, all of whom had undergone exploration for groin recurrence. The overall incidence of major complications were 0.8%, Major complications included three cases of deep venous thrombosis (0.5%), one pulmonary embolus, and one foot-drop. There was one major vascular injury, the common femoral vein being damaged in a patient having a third operation on the groin for persistent recurrence. Vein patch repair was performed and patency was maintained. We found more number of major complications in our study this could be due to expertization of operating surgeon, aseptic precaution, and overall health of the patients i.e. associated co-morbidities may complicate it.

CONCLUSION

It can be concluded from our study that the most common complication were minor i.e. Wound infection, Neurasthesia, Lymphoedema, Superficial thrombo-phlebitis etc. and the major complication were Nerve injury, DVT only, Major vessel injury, DVT with PE.

REFERENCES

1. Dodd‟s H, Cockett‟s FB. The pathology and Surgery of the veins of the lower limbs. London: Churchill Livingstone; 1956:28-64
2. Tamparo, Carol (2011). Fifth Edition: Diseases of the Human Body. Philadelphia, PA: F.A. Davis Company. p. 335. ISBN 978-0-8036-2505-1.
3. Varicose veins. From Wikipedia, the free encyclopedia. Available at: https://en.wikipedia.org/wiki/Varicose_veins#Causes accessed on: Sep 18.
4. Ng M, Andrew T, Spector T, Jeffery S (2005). "Linkage to the FOXC2 region of chromosome 16 for varicose veins in otherwise healthy, unselected sibling pairs". Journal of Medical Genetics. 42 (3): 235–9. doi:10.1136/jmg.2004.024075. PMC 1736007 .
5. Kate Griesmann (March 16, 2011). "Myth or Fact: Crossing Your Legs Causes Varicose Veins". Duke University Health System. Retrieved March 1, 2014.
6. Franceschi, Claude (1996) "Physiopathologie Hémodynamique de l'Insuffisance veineuse", p. 49 in Chirurgie des veines des Membres Inférieurs, AERCV editions 23 rue Royale 75008 Paris France.
7. Hobbs JT (October 2005). "Varicose veins arising from the pelvis due to ovarian vein incompetence". Int J Clin Pract. Int J Clin Pract. 59: 1195–203.
8. Giannoukas AD, Dacie JE, Lumley JS (July 2000). "Recurrent varicose veins of both lower limbs due to bilateral ovarian vein incompetence". Ann Vasc Surg. 14: 397–400.
9. Marsh P, Holdstock J, Harrison C, Smith C, Price BA, Whiteley MS (June 2009). "Pelvic vein reflux in female patients with varicose veins: comparison of incidence between a specialist private vein clinic and the vascular department of a National Health Service District General Hospital". Phlebology. 24: 108–13.
10. A.M. Whiteley; D.C. Taylor; S.J. Dos Santos; M.S. Whiteley (2014). "Pelvic Venous Reflux is a Major Contributory Cause of Recurrent Varicose Veins in More Than a Quarter of Women". Journal of Vascular Surgery: Venous and Lymphatic Disorders. 2: 390–396..
11. Whiteley MS (September 2014). "Part One: For the Motion. Venous Perforator Surgery is Proven and Does Reduce Recurrences". European Journal of Vascular and Endovascular Surgery. 48 (3): 239–42.
12. Rutherford EE, Kianifard B, Cook SJ, Holdstock JM, Whiteley MS (May 2001). "Incompetent perforating veins are associated with recurrent varicose veins". European Journal of Vascular and Endovascular Surgery. 21 (5): 458–60.

13. Pathophysiology for the Boards and Wards, Fourth Edition Varicose veins. From Wikipedia, the free encyclopedia. Available at : https://en.wikipedia.org/wiki/Varicose_veins#Causes accessed on : Sep 18
14. Nesbitt, C; Bedenis, R; Bhattacharya, V; Stansby, G (Jul 30, 2014). "Endovenous ablation (radiofrequency and laser) and foam sclerotherapy versus open surgery for great saphenous vein varices". The Cochrane Database of Systematic Reviews. 7: CD005624.
15. G Critchley, A Handa, A Maw, Angela Harvey, M R Harvey, C R R Corbeff. Complications of varicose vein surgery. Ann R Coll Surg Engl 1997; 79: 105-110

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