

CLINICAL PROFILE AND RISK ASSOCIATION OF DVT

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Abstract:

This prospective study was conducted in Mymensingh Medical College Hospital over a period of one year among the diagnosed patients of DVT in medicine units to find out the disease association and risk factors. Mean age of the patients at the time of diagnosis was 37.8 years with a standard deviation of 12.73 years with an even distribution. There was a mild female preponderance (M:F=2:3). 72.5% and 27.5% of the patients were admitted with unilateral and bilateral leg swelling respectively. No established risk factors was found about 30% of case OCP and malignancy account for highest number of association almost 22.5 % to each and other associated conditions were congestive cardiac failure (7.5%), post partum period (7.5%), renal impairment (7.5%) and prolonged immobilization (2.5%) . 92.5% patients enjoyed resolution while 7.5 patients died. Among three patients who died, two were male and one was female. However, thrombotic scan was not available and can not be offered to any patients. Almost all the findings of this study correlate well with other previous studies except age distribution for which further evaluation may be necessary.

Introduction:

The presence of thrombus within a superficial or deep vein and the accompanying inflammatory response in the vessel wall is termed venous thrombosis or thrombophlebitis.¹ The most important consequences of this disorder are pulmonary embolism and the syndrome of chronic venous insufficiency.¹ Deep vein thrombosis (DVT) accounts for more than half of venous thromboembolic (VTE) events, and the average annual incidence of new DVT cases is about 48 per 100,000 persons.^{2,3} Approximately 40 % of these cases appear to be idiopathic in origin.⁴ Various studies have shown that the first incidence of DVT increases with age. There is essentially no difference in DVT incidence by race or gender.^{4,5,6} The spectrum of clinical sequelae of DVT ranges from complete clot resolution to death due to pulmonary embolism(PE). In one study, almost 40% of DVT patients with no symptoms of PE had evidence of PE on ventilation-perfusion and chest roentgenogram.⁷

Appropriate prophylaxis of DVT requires careful consideration of treatment risks and benefits; aggressive therapy increases the risk of bleeding, but an overtly conservative approach might lead to PE, or even death. For patients at high risk of DVT, benefits of therapy outweigh risks, but for patients at low risk of DVT, treatment risks may exceed the risk of PE. Using the patient's symptoms, a clinical risk of low, medium high likelihood of DVT is established with well's scoring system.⁸ DVT is unlikely if the score is <2 and DVT is likely if the score is ³ 2. Surgery is the highest independent risk factor for DVT which varies with the type of surgery.⁹ Other risk factors for DVT include trauma, malignant neoplasm, chemotherapy, neurologic disease with paresis, central venous catheter or pacemakers, varicose vein, and superficial vein thrombosis.¹⁰ Previous history of VTE should also be considered.

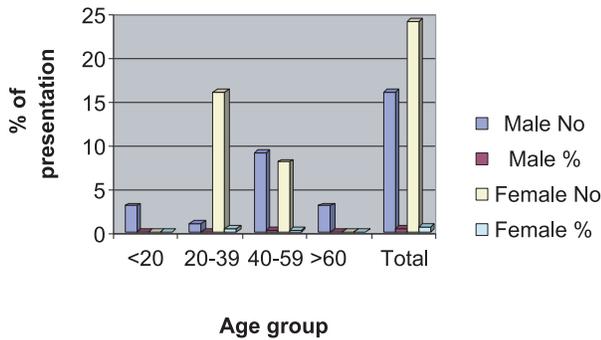
In this study we would like to see the disease association or risk factors of the patient's with established DVT admitted in medicine unit of MMCH

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Patients and Methods:

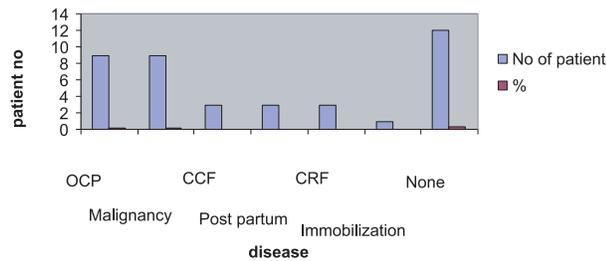
In this study all the patients were admitted in medicine units of Mymensingh Medical College Hospital and no age and sex is excluded. Diagnosis of DVT was confirmed by Doppler ultrasonography. Appropriate available investigations were done to find out the associated risk factors. All the patients were treated with subcutaneous low molecular weight heparin and warfarin. Whenever appropriate referral options were offered to the patients. Due to unavailability of facilities thrombotic scan is excluded from the study.

Age and sex distribution

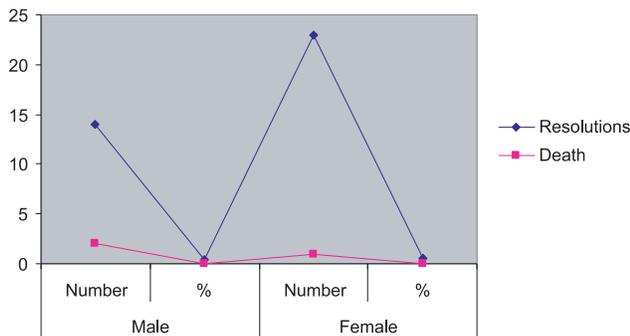


Age and sex distribution

associated conditions



Associated features



Outcome

Results:

This study includes 40 patients, who were admitted in medicine units of Mymensingh medical college Hospital, over a period of one year. Diagnosis was confirmed by color doppler ultrasonography.

In this study mean age of the patients at the time of presentation was 37.8 years with a standard deviation of 12.73 years with an even distribution.

40% patients were male and 60% patients were female. In case of age of presentation 7.5% were below 20 years of age, 42.5% were 20-39 years of age, 42.5% were 40-59 years age, and 7.5% were above 60 years of age.

72.5% patients were presented with unilateral leg swelling, where 28.5% patients presented with bilateral leg swelling. Among patients who were presented with unilateral leg swelling, 7.5% below 20 years of age, 27.5% were 20-39 years age group, 30% between 40-59 years of age and 7.5% were above 60 years. On the other hand with bilateral presentation 15.5% were 20-39 years of age, 12.5% were 40-59 years age and no case was found in younger and older age patients.

No established risk factors was found about 30% of case, OCP and malignancy accounts for highest number of association almost 22.5% to each, others associated conditions were congestive cardiac failure (7.5%), post partum period (7.5%), chronic renal failure (7.5%) and prolonged immobilization (2.5%).

92.5% patients enjoyed resolution while 7.5 patients died. Among three patients who died two were male and one was female.

Discussion:

In this study mean age of the patients at the time of presentation was 37.8 years with a standard deviation of 12.73 years with an even distribution. This findings makes an marked discrepancy with previous studies where increasing age was found to be a risk factor for DVT,¹¹⁻¹³ however in all those studies patients from other disciplines were also included. But still small sample size might have contributed to above finding.

40% of the patients were male and 60% were female which is consistent with PREPIC study by Decousus et al.¹¹ where 48% patient were male and 52% were female. However this finding is inconsistent with few other studies by Levine et al.¹² (m-60%), Merli et al.¹³ (m-55%). 72.5% patients presented with unilateral leg swelling and 27.5% with bilateral leg swelling.

No risk or disease association can be established in 30% of cases. Among them 66% belongs to less than 40 years age group. One of the shortcomings of this study is the unavailability of thrombotic scan which is essential if DVT developed in an early age. For this reason it will not be wise to designate the patient group to be suffering from idiopathic DVT though the findings are consistent with other studies where thrombotic scan was available and still idiopathic cases were as high as 40%.⁴

22.5% patients used to take OCP, but this should not be regarded as an absolute risk as most of the patients are less than 40 years of age and thrombotic scan were not done. Still OCP should be considered as a risk factor.¹ The incidence of DVT is increased during pregnancy particularly in the third trimester and in the first month postpartum.¹ In this study 7.5% patients presents during postpartum.

22.5% patients were suffering from malignant disease, majority of whom were suffering from intra abdominal malignancy, findings of which are consistent with the study of Levine et al.¹²

7.5% patients were suffering from CCF. These findings are consistent with Merli et al¹³ (10%) but inconsistent with the PREPIC¹¹ study (22%). 7.5% patients also associated with renal impairment particularly Nephrotic syndrome, and one patient developed DVT after starting erythropoietin.

Among all the results age distributions of this study does not match any previous studies.^{11, 12, 13} Possibilities might be small sample size, or exclusions of DVTs occurring in surgical and gynecological procedures. Surprisingly no patients with stroke with DVT were found in this study.

Conclusion:

DVT is a cause of substantial morbidity and unaccepted mortality in a vast majority of patients, which in many instances can be prevented by early suspicion and appropriate prophylactic interventions. In this study a surprisingly high percentage of patients belong to young age group and if thrombotic scan can be made more widely available it may be possible to recognize at risk population with a greater certainty. Even than the data regarding prothrombotic states currently available are obtained in developed world, which may not match our geographical distribution.

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