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A Change in Trend of age Related Distribution of Dvt

KEYWORDS: Deep Vein Thrombosis, Venous Thromboembolism , age related distribution, etiological factors, risk factors.

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ABSTRACT *Background: Numerous studies have shown that the incidence of DVT increases with increasing age. It is also said that the majority of cases have no readily identifiable risk factor.*

Objectives: To study the distribution pattern of DVT among the various age groups and to identify the importance of specific Risk Factors across the various age groups.

Patients and Methods: Retrospective analysis of Medical Records of patients admitted at our Tertiary Care Centre for a time period of one year.

Results: Contrary to the results of previous studies , we found a nearly equal distribution of DVT in the age groups between 20 – 70 years. More than 50% of patients with DVT have no readily identifiable risk factors.

Conclusion: Age is not an important risk factor for development of DVT. There is a need for further evaluation of the Etiology of DVT as more than 50% of the patients in our study did not have a readily identifiable risk factor for the development of DVT.

INTRODUCTION

Deep Vein Thrombosis (DVT) is a major worldwide health problem, especially among the elderly. A number of published studies on the incidence of Venous Thromboembolism(i.e. DVT + Pulmonary Embolism) have shown that the incidence of first time VTE increases exponentially with age. [1,2]

In fact, age > 40 years is taken as an independent risk factor for DVT , with the risk approximately doubling with each decade thereafter. [1,3] Overall 25-50 % of patients with first time DVT have an Idiopathic condition without a readily identifiable risk factor for developing the same.

We decided to conduct a Retrospective study on the "Age Distribution of DVT" among the Inpatients at our Tertiary Care Centrein Mangalore, India. We also simultaneously compared the Etiological/Risk factors of DVT among the various age groups in our study.

The aim of this study was to confirm/contradict the findings of numerous published studies, all of which show an increased incidence of DVT with age, and an absence of a readily identifiable risk factor for developing DVT in a majority of cases.

PATIENTS AND METHODS

A retrospective study was conducted at our Tertiary Care Centre using the Inpatient Hospital Records maintained at the Medical Records Department. Medical Records of all patients who were admitted with DVT/developed DVT during the course of stay in Hospital(between Jan 2013 and Dec 2013) were scrutinized. Presence of Risk factors/coexistent medical or surgical conditions were also identified. Readmissions for the same complaints were excluded from the study. A total of 50 new cases of DVT were identified. The obtained data was analyzed for the age distribution of DVT and for the distribution of other identifiable risk factors across the various age groups.

RESULTS

On analyzing the obtained data the following statistical information was obtained.

1) the Mean age of presentation of DVT was 49.28 years
2) interestingly the distribution of DVT among the Inpatients of our centre was , nearly the same for the 2nd, 3rd, 4th, 5th and 6th decades of life.
3) In 56% of the cases , no identifiable risk factor/coexistent medical or surgical condition could be found.
4) 16% of the cases were associated with a Malignant Neoplasm, which was found to be the single most important risk factor in the etiology of DVT.
5) 12% of patients were convalescing from a Surgical or Orthopedic intervention.
6) 8% of cases had been admitted for an Acute Medical Illness and had developed DVT over the course of stay in hospital.
7) 4% 0f the cases had a diagnosed cause for Thrombophilia, (i.e. 1 case of APLA syndrome and 1 case of Hyperhomocysteinemia.)
8) 4% of the patients had a concurrent Chronic Medical Illness.

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The age distribution of DVT has been depicted in a Bar Diagram(Table 1) and Pie chart(table 2) shown below

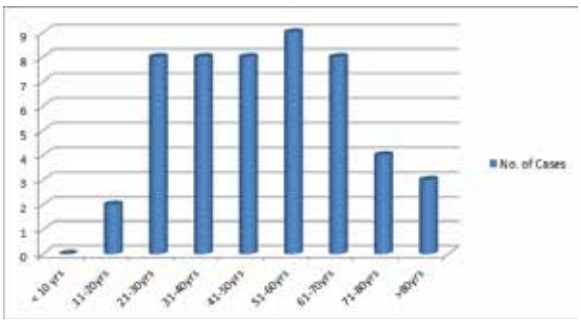


Table 1: Bar Diagram showing the Age Distribution of DVT

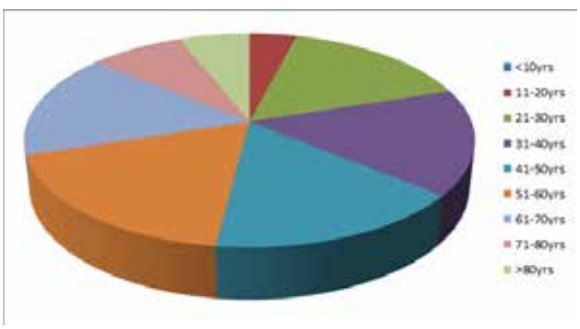
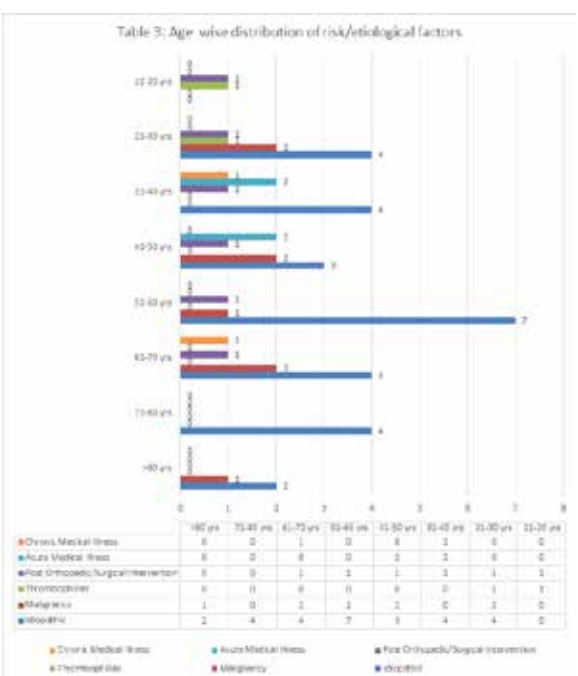


Table 2: Pie Chart showing the Age Distribution of DVT.

Also given below is the age group wise(every decade) , distribution of Etiological /Risk factors of DVT



DISCUSSION

Venous Thromboembolism(VTE) includes several manifestations of the same disease process, which include – DVT, Ischemic Stroke and Pulmonary Embolism.[4] Over 100 years ago , Rudolph Virchow[5] hypothesized that Thrombosis was the result of the interaction of the following factors -

1) Stasis of blood
2) Hypercoagulability of blood, and
3) Damage to the Vascular Endothelium

It has become increasingly clear that one or more of Virchows Triad of Pathophysio logical factors is assosciated with the development of DVT. The important risk factors for DVT include Major surgery/Trauma, Acute medical illness, Malignancy, Obesity, Pregnancy, Hormone Therapy, Thrombophilias etc.4 Patients with a Malignant Neoplasm have a four fold increase in risk of developing DVT. This risk is further increased to six fold when Chemotherapy is given.6 Major Orthopedic/Surgical intervention is also associated with a high risk of DVT , and studies have shown that prophylactic Low Molecular Weight Heparin can reduce its incidence.7Age is considered an important risk factor for development of DVT with various published studies showing increasing age as an independent risk factor for DVT.

However , the results of our study show a nearly equal distribution pattern in the occurrence of DVT between the 3rd to 7th decades of life. We feel, the findings of our study would either indicate that

1) Age is not an important risk factor for development of DVT
2) The increased significance of currently unidentifiable risk factors for DVT in the younger age group / birth of new risk factors in the younger age group, since more than 50 % of cases had no identifiable risk factor for developing DVT.

Hence , we the authors of this study feel, there is A Change in Trend of the Age Distribution of DVT, with individuals between the age group of 20 – 70 years having nearly equal chances of developing DVT.

REFERENCE 1) Anderson FA Jr., Wheeler HB, Goldberg RJ, et al. A population based perspective of the hospital incidence and case fatality rates of deep vein thrombosis and pulmonary embolism. The Worcester DVT Study. Arch. Intern Med. 1991;151:933-938. | 2) Richard HW. The epidemiology of Venous Thromboembolism. Circulation. 2003;107:I-4-I-8. | 3) Caprini JA, Merli GJ, Bhatt DL. Risk factors for Venous Thromboembolism. American Journal of Medicine.May 2005;1-16 | 4) Geerts WH, Heit JA, Clagett GP, et al. Prevention of venous thromboembolism. Chest. 2001;119:132S- 175S. | 5) Virchow R. Neuer fall von todlichen. Emboli der lungenarterie. Arch Pathol Anat. 1856;10:225-228. | 6) Heit JA, Silverstein MD, Mohr DN, et al. Risk factors for deep vein thrombosis and pulmonary embolism: A population based case control study. Arch Intern Med. 2000;160:809-815. | 7) Geerts WH, Pineo GF, Heit JA, et al. Prevention of venous thromboembolism: The Seventh ACCP Conference on Antithrombotic and Thrombolytic Therapy. Chest. 2004;126:338S-400S. |