



PREVELANCE OF DEEP VEIN THROMBOSIS IN ACUTE STROKE.

General Medicine

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ABSTRACT

INTRODUCTION: Venous thrombo embolism [VTE] is a frequent cause of preventable illness and death in hospitalized patients. 25% of all cases of venous thrombo embolism are associated with hospitalization and 50 to 75% of cases of VTE in hospitalized patients occur on those in medical wards.

AIMS AND OBJECTIVES: Prevalence of Deep vein thrombosis in patients admitted with acute stroke. The need for routine anticoagulation for prophylaxis against DVT in acute stroke patients.

MATERIALS AND METHODS: This study was done among 50 patients between August 2019 to July 2020 Alluri Sitarama Raju Academy of Medical Sciences, Eluru, Andhra Pradesh.

INCLUSION CRITERIA:

1. Patients with acute stroke of less than two weeks duration.
2. Recovery of power from admission till the end of study period less than 3/5
3. Patients with or without known history of diabetes mellitus, systemic hypertension.
4. Patients with risk for accelerated atherogenesis such as smoking or alcoholism.

EXCLUSION CRITERIA:

- Duration of stroke more than two weeks.
- Recovery of power from time of admission to screening for DVT is more than 3/5
- Patients on treatment with drugs like aspirin, OCPs or anticoagulants.
- Patients with underlying procoagulant states previously known, Pregnancy.
- Patients with underlying connective tissue diseases.

RESULTS: 1. The prevalence of DVT was found in 6% of Stroke Patients. 2. The prevalence of DVT was found more commonly in women than in men. 3. The occurrence of DVT in acute stroke is independent of the presence of co morbid conditions like diabetes, systemic hypertension, ischemic heart disease and high risk behaviors like smoking and alcoholism.

CONCLUSION: The prevalence of DVT in acute stroke patients in our hospital group was 6% which is significantly less than that observed in western population. 2. Duplex USG is a useful tool which can be used as a screening tool for early diagnosis of DVT. 3. DVT occurs more commonly in paralysed limb than non paralysed limb. 4. VTE is a preventable cause of morbidity and mortality in stroke patients and there is a need for more anticipatory approach in diagnosis. 5. The presence of comorbid conditions like diabetes, SHT, IHD, smoking and alcoholism does not affect the occurrence of DVT in acute stroke thus it is an independent contributor to morbidity and mortality in stroke patient.

KEYWORDS

INTRODUCTION:

Venous thrombo embolism [VTE] is a frequent cause of preventable illness and death in hospitalized patients. 25% of all cases of venous thrombo embolism are associated with hospitalization and 50 to 75% of cases of VTE in hospitalized patients occur on those in medical wards.

In general, detection of deep vein thrombosis [DVT] in hospitalized patients not on thromboprophylaxis by venography is 10.5% to 14.9% and by ultrasound venous Doppler is 5% 2. Thrombosis was asymptomatic in 70% of cases.

Pulmonary embolism occurred in 0.3 to 1.5 % of cases and proximal DVT in 2 to 4.9%. PE accounts for 5 to 10 % of deaths in hospitalized patients.

Three randomized control trials with Enoxaparin Analysis of data from IST, international stroke trial allows a comparison of the effect of medium dose heparin [12,500 U of UFH twice daily] initiated within 48 hrs of ischemic stroke and continued for two weeks to no heparin on a number of end points.

Although this dosing regimen reduced the risk of PE and recurrent ischemic stroke, the reduction was more than offset by an increased risk of Hemorrhagic transformation and extra cranial hemorrhage. Overall there was an increased risk of death and or recurrent stroke and major non fatal extra cranial bleeds of 0.5% and 1.5% respectively during the treatment period.

AIMS AND OBJECTIVES:

Prevalence of Deep vein thrombosis in patients admitted with acute stroke.

The need for routine anticoagulation for prophylaxis against DVT in acute stroke patients.

MATERIALS AND METHODS:

This study was done among 50 patients between August 2019 to July 2020 Alluri Sitarama Raju Academy of Medical Sciences, Eluru, Andhra Pradesh.

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EXCLUSION CRITERIA:

- Duration of stroke more than two weeks.
- Recovery of power from time of admission to screening for DVT is more than 3/5
- Pregnancy
- Patients on treatment with drugs like aspirin, OCPs or anticoagulants
- Patients with underlying procoagulant states previously known

• Patients with underlying connective tissue diseases.

RESULTS:

In our study the prevalence of DVT in acute stroke was analysed by ultrasound venous Doppler of lower limbs. The analysis of co morbid conditions like diabetes, systemic hypertension, ischemic heart disease, smoking and alcoholism were analysed to find out if there was any association between their presence and occurrence of DVT. In all these parameters compared within the group of DVT positive patients the p value was more than 0.05 which is statistically insignificant

1. The prevalence of DVT was found in 6% of Stroke Patients.
2. The prevalence of DVT was found more commonly in women than in men.
3. The occurrence of DVT in acute stroke is independent of the presence of co morbid conditions like diabetes, systemic hypertension, ischemic heart disease and high risk behaviors like smoking and alcohol.

Table1: Prevalence Of DVT In Acute Stroke Patients.

Total Number Of Patients In Whom Venous Doppler Was Done	DVT positive	Percentage
50	3	6%

Table2: Patient Characteristics.

Characteristics	Present		Absent	
	(No)	%	(No)	%
DM	9	18	41	82
SHT	15	30	35	70
IHD	2	4	48	96
SMOKING	22	44	28	56
ALCOHOLISM	14	28	36	72

Table 3: CT Findings.

CT	Number	%
Infarct	42	84
Hemorrhage	8	16
Total	50	100

Table 4: Sex Distribution Of DVT.

Sex	Number	DVT positive	DVT negative
Male	36	1	35
Female	14	2	12
Total	50	3	47

DISCUSSION:

The prevalence of DVT in patients with acute stroke admitted into government general hospital is found to be 6% as against a prevalence of 60% reported in western literature.

The exact cause for this discrepancy is not known but there does seem to be difference in occurrence of DVT in different ethnic groups as revealed by studies. The incidence of post op DVT in Europe is twice that of North America, similarly autopsy series showed prevalence of thrombo embolism is 40.6% in Boston and 13.9% in Kyushu, Japan.

This may probably be explained due to regional variation in underlying medical conditions or true variation in genetic and environmental factors. There are also studies published reporting increases in incidence of DVT with age.

In elderly probably there is an increase in number of thrombotic risk factors or there exist an acquired thrombotic state, with anatomic changes in soleal veins with more pronounced stasis in valve pockets.

The prevalence of DVT both asymptomatic and symptomatic in acute stroke patients in our hospital was only 6% and the exact occurrence of pulmonary embolism in these patients is not known. Though there are widely conducted trials in the west on routine prophylaxis of DVT with anticoagulants as early as day 2 of stroke, such studies are not available in Indian population and the data from west cannot be extrapolated to our population as the prevalence of DVT is found to be very low and majority are asymptomatic.

The mortality and morbidity rate of patients with acute stroke in our study population was not significantly affected by withholding routine anticoagulation therapy. Risk associated with anticoagulation in acute stroke should also be taken into consideration. In the , treatment with low dose unfractionated heparin [5000 U s.c. twice daily] significantly

reduced death and recurrent stroke at 14 days from 12 to 10.8%, a benefit attributable to decreased risk of recurrent ischemic stroke as PE was not significantly reduced.

CONCLUSIONS:

1. The prevalence of DVT in acute stroke patients in our hospital group was 6% which is significantly less than that observed in western population.
2. Duplex USG is a useful tool which can be used as a screening tool for early diagnosis of DVT.
3. DVT occurs more commonly in paralysed limb than non paralysed limb.
4. VTE is a preventable cause of morbidity and mortality in stroke patients and there is a need for more anticipatory approach in diagnosis.
5. The presence of comorbid conditions like diabetes, SHT,IHD, smoking and alcoholism does not affect the occurrence of DVT in acute stroke thus it is an independent contributor to morbidity and mortality in stroke patient.

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