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Clinical Profile of Patients with Deep Vein Thrombosis: A Hospital-Based Cross-Sectional Study

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ABSTRACT

Deep vein thrombosis (DVT) remains an under-recognized but potentially fatal condition. Understanding the clinical profile of affected patients can facilitate earlier diagnosis and targeted prevention strategies. To evaluate the clinical profile of patients diagnosed with DVT at a tertiary care hospital. This hospital-based cross-sectional study included 80 patients with Doppler-confirmed DVT. Demographic details, BMI, limb involvement, and risk factors were systematically recorded and analyzed using descriptive statistics. The majority of patients were aged >60 years (27.5%), with a female predominance (56.25%). Lower limb DVT was equally distributed between the right and left sides, with bilateral involvement in 2.5% of cases. Surgery or trauma (25%), prolonged immobilization (22.5%), pregnancy/postpartum (18.75%), and malignancy (12.5%) were identified as major risk factors. Idiopathic cases comprised 21.25%. Conclusion: The clinical profile of DVT patients reflects diverse risk factors and demographic patterns. These findings underscore the importance of tailored preventive strategies, particularly in high-risk groups.

Keywords: Deep vein thrombosis, risk factors, clinical profile.

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INTRODUCTION

Deep vein thrombosis (DVT) is a common but underdiagnosed condition that involves the formation of thrombi in the deep venous system, predominantly in the lower extremities [1]. It can lead to life-threatening complications such as pulmonary embolism and long-term morbidity in the form of post-thrombotic syndrome [2, 3]. The incidence of DVT varies across different populations and is influenced by several risk factors including advanced age, immobility, malignancy, surgery, trauma, and genetic predispositions [4]. Despite global recognition, the clinical profile of DVT in the Indian population remains underexplored. Early recognition of the clinical profile aids in risk stratification, prevention, and prompt treatment [5, 6]. This study aims to analyze the demographic and clinical characteristics of patients diagnosed with DVT at a tertiary care center. Understanding the profile of affected patients—including age, gender, BMI, limb involvement, and associated risk factors—can contribute valuable insight into targeted prevention strategies and optimize patient outcomes in similar settings.

METHODOLOGY

The present hospital-based cross-sectional study was conducted in the Department of General Medicine, over a two-year period from 2020 to 2023. Ethical approval was obtained prior to initiation. Written informed consent was obtained from all participants.

Inclusion criteria comprised patients diagnosed with deep vein thrombosis (DVT) based on clinical evaluation and confirmation through Doppler ultrasonography. Exclusion criteria included patients with a known bleeding disorder or contraindications to anticoagulation therapy.

Clinical data, including demographic details (age, gender), BMI, side and site of limb involvement, and associated risk factors, were recorded systematically using a structured case record form. Relevant laboratory and imaging investigations were performed as per institutional protocol.

Data were entered into Microsoft Excel and analyzed using descriptive statistics. Frequencies and percentages were calculated for categorical variables, while means and standard deviations were calculated for continuous variables. The findings were interpreted to determine the prevalent clinical profile.

RESULTS

Table 1: Age wise distribution

Age Group (years)	No. of Patients (%)
<30	8 (10%)
31–40	12 (15%)
41–50	18 (22.5%)
51–60	20 (25%)
>60	22 (27.5%)

Table 2: Gender wise distribution

Gender	No. of Patients (%)
Male	35 (43.75%)
Female	45 (56.25%)

Table 3: Site wise distribution

Site	No. of Patients (%)
Left Lower Limb	38 (47.5%)
Right Lower Limb	40 (50%)
Bilateral	2 (2.5%)

Table 4: Risk factors

Risk Factor	No. of Patients (%)
Surgery/Trauma	20 (25%)
Malignancy	10 (12.5%)
Prolonged Immobilization	18 (22.5%)
Pregnancy/Postpartum	15 (18.75%)
Unknown/Idiopathic	17 (21.25%)

DISCUSSION

The present study provides an important overview of the clinical profile of patients diagnosed with deep vein thrombosis (DVT) at a tertiary care center in India. A total of 80 patients were analyzed [6, 7].

The majority of patients (27.5%) were aged above 60 years, consistent with findings from global literature that associate increasing age with a higher incidence of DVT. Elderly individuals are more prone to venous thromboembolism owing to age-related changes in the coagulation cascade, decreased mobility, and comorbidities. In our study, females slightly outnumbered males (56.25% vs. 43.75%). This contrasts with some Western studies where males predominate; however, the female predominance in our cohort may be attributed to pregnancy and postpartum-related risk factors, which accounted for a substantial proportion of female cases (18.75%). Additionally, cultural factors and referral biases may also play a role.

Regarding limb involvement, DVT was almost equally distributed between the left and right lower limbs (47.5% vs. 50%), with bilateral involvement observed in only 2.5% of cases. The predominance of lower limb DVT aligns with the pathophysiological understanding that venous stasis is more likely in the lower extremities, particularly in immobile individuals. An important finding was the distribution of risk factors. Surgery or trauma emerged as the most common identifiable risk factor (25%), consistent with well-established associations in the literature. Prolonged immobilization (22.5%) and pregnancy/postpartum status (18.75%) were also significant contributors. Notably, malignancy accounted for 12.5% of cases, underscoring the hypercoagulable state associated with cancer [8].

Interestingly, approximately 21.25% of cases were idiopathic, reinforcing the need for vigilant screening in patients without overt risk factors. Our results corroborate previous studies by Pal et al49 and L Chinglensana et al5, who also reported a significant proportion of idiopathic DVT and emphasized the need for clinical vigilance. The similar age and gender trends in our cohort further validate existing findings, although regional variations remain an important consideration [9, 10].

Overall, the study underscores the multifactorial nature of DVT and the need for individualized risk assessment. The observed trends highlight priority areas for preventive strategies, including perioperative prophylaxis, postpartum surveillance, and targeted screening of high-risk individuals such as cancer patients.

CONCLUSION

The clinical profile of DVT patients reflects diverse risk factors and demographic patterns. These findings underscore the importance of tailored preventive strategies, particularly in high-risk groups. Keywords: Deep vein thrombosis, risk factors, clinical profile.

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