

Incidence of Clinical Deep Venous Thrombosis in Cancer Patients

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Objectives

Malignancy has been recognized as one of the most significant acquired risk factors for developing VTE. The aim of this study was to determine the incidence of clinical deep venous thrombosis in cancer patients presenting to medical oncology Department, Jinnah Postgraduate Medical Centre (JPMC), Karachi.

Material and Methods

Study design: cross-sectional observational Site: Medical Oncology Department of Jinnah Post Graduate Medical Centre, Karachi.

Duration: 6 months.

Sample size: 105 between 18-75 years old

Inclusion Criteria:

- Histopathology-proven malignancy were included who presented with symptoms of unilateral limb swelling, pain, warmth, tenderness, or erythema.
- All the subjects had a lower limb Doppler ultrasonography to confirm the DVT.

Exclusion Criteria:

- Patients already diagnosed and receiving treatment for DVT.
- Patients on long-term therapeutic anticoagulation.

Results

Patient demographics

Cancer Type	Total Patients
Breast cancer	26
Hematological malignancy	19
Gastrointestinal cancer	18
Lung cancer	14
Gynecological cancer	12
Genitourinary cancer	9

54.6

mean age, years (SD 12.8)

57.1%

female participants

11.4%

Doppler-confirmed DVT

12/105

patients with DVT

DVT by cancer type

Proportion of patients with Doppler-positive DVT

Gastrointestinal

22.2%

Hematological

15.8%

Lung

14.3%

Overall cohort

11.4%

Factors significantly associated with DVT

Reduced mobility

strongest association, p = 0.008

Advanced disease

stage III/IV

Chemotherapy

exposure

Central venous

catheter

use

Limitations

The cross-sectional design precluded analysis of temporal associations between the progression of cancer, exposure to treatment, and incidence of DVT. Doppler ultrasonography was only performed in those with clinical suspicion of DVT, thus preventing the detection of asymptomatic thrombosis. In addition, the sample size was rather small, and thorough stratified analysis by cancer type and treatment was not possible.

Conclusion

A large percentage of cancer patients (11.4%) were found to have clinical deep venous thrombosis. Thrombotic risk was higher in cases of advanced malignancy, lower mobility, and factors related to treatment.

References

- Mahajan A, Brunson A, Adesina O, Keegan THM, Wun T. The incidence of cancer-associated thrombosis is increasing over time. Blood Adv. 2022;6(1):307-320. doi: <https://doi.org/10.1182/bloodadvances.2021005590>.