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INCIDENTAL ARTERIAL AND VENOUS THROMBOEMBOLIC EVENTS IN PATIENTS WITH CANCER: INSIGHTS FROM A 608-CASE RETROSPECTIVE ANALYSIS

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PURPOSE: The current study aims to estimate the prevalence of incidental pulmonary embolism (iPE), incidental deep venous thrombosis (iDVT), and incidental arterial thromboembolism (iATE) and determine risk factors associated with the evolution of iDVT and iPE events in cancer patients.

METHODS: This was a retrospective, single-center, observational study. We reviewed the records of 910 patients with a history of cancer who were referred to our institution between January 1, 2018, and December 31, 2019. Clinical data were retrieved from electronic medical records, including demographic and clinical characteristics, radiological data, and laboratory findings. The results of routine contrast-enhanced computed tomography (CT) scans of the chest and abdomen-pelvis of cancer patients were also retrieved. CT scans of the chest and abdomen-pelvis are performed on cancer patients undergoing treatment to assess response to therapy and restage the disease.

The inclusion criteria were as follows: (1) had an established diagnosis of either solid or hematologic malignancy, and (2) received cancer treatment and/or follow-up at our institution. The exclusion criteria were as follows: (1) Reports of patients with symptomatic or suspected VTE or ATE, (2) Reports of CT scans without contrast, (3) Radiology reports written at other institutions, (4) Patients who have more than one type of cancer and (5) Patients with medical records that lacked one or more of the study parameters.

Baseline demographics and clinical data of the patients were all recorded, including age, gender, the presence of metastases, and the type of malignancy. Relevant variables for patients with iVTE were collected and included: Chemotherapy or radiotherapy within the previous 90 days, the presence of thrombocytosis, whether the patient had undergone surgery within the last 90 days, and whether the patients were smokers or had diabetes. The location and frequency of thromboembolic events were also recorded.

RESULTS: Of the 608 patients, 59 and 6 were diagnosed with iVTE and iATE, respectively. Significant risk factors for iVTE included recent bleeding (p=0.043), and chemotherapy or radiotherapy in the last 90 days. Colorectal [AOR=3.88, 95% CI (1.09, 13.84)] and pancreatic cancers [AOR=15.66, 95% CI (3.62, 67.82)] showed a higher likelihood of iDVT. Patients with iPE [AOR=4.86, 95% CI (1.78,13.27)] and recent chemotherapy or radiotherapy [AOR=5.10, 95% CI (2.70,9.8)] were more prone to iDVT. A strong association was found between iDVT [AOR = 5.05, 95% CI (1.83,13.94)] and iPE. Patients who received chemotherapy or radiotherapy had a lower risk of developing iPE [AOR=0.09, 95% CI (0.01, 1.0)] compared to those who did not.

CONCLUSIONS: Colorectal and pancreatic cancer patients are at a higher risk of iDVT. Early iVTE and iATE detection and management could result in high-quality cancer patient care.

CLINICAL IMPLICATIONS: The management of incidental venous and arterial thromboembolic events, when detected early, can greatly improve the quality of care for cancer patients. This underscores the importance of vigilant monitoring for these conditions, particularly in patients undergoing chemotherapy or radiotherapy, to facilitate timely intervention and potentially enhance outcomes.

DISCLOSURES:

No relevant relationships by Haytham AbuMohsen

No disclosure on file for Iyad Ali

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No relevant relationships by Ahmed Awadghanem

No relevant relationships by Jihad Hamaida

No relevant relationships by Tariq Hattab

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