

Tromboembolismo venoso: aspetti clinici e diagnostici

CATHETER-RELATED THROMBOSIS IN CANCER PATIENTS: A RETROSPECTIVE REAL-WORLD STUDY

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Background. Catheter-related thrombosis (CRT) is one of the most frequent and clinically relevant complications of central venous access in cancer patients, driven by cancer-associated hypercoagulability and device-related factors. The increasing use of central venous catheters (CVCs) and peripherally inserted central catheters (PICCs) for the administration of chemotherapy and supportive treatments has heightened awareness on CRT as a major component of cancer- associated venous thromboembolism (VTE). CRT may lead to serious clinical consequences including pulmonary embolism, treatment delays, loss of venous access and reduced quality of life.

Aims. the aim of this study was to evaluate the treatments and complications of CRT in cancer patients. We report the experience of a hub hospital, from catheter placement through follow-up after the primary event.

Methods. we retrospectively collected data from oncological patients diagnosed with CRT between 2023 and 2025 at the Angiology Unit of Angelo Hospital in Venezia-Mestre. All 649 enrolled patients had placed a venous catheter for chemotherapy at the hospital's Pain Management Unit. Most patients were evaluated at the thrombosis diagnosis and at 1 and 3 months after diagnosis.

Results. CRT developed in 89 of oncologic patients (13.7%) who underwent venous catheter placement. No significant differences in CRT incidence were observed according to tumor type (hematologic vs. solid). Affected patients had a median age of 66 years; 48.3% were male. Overall, 10.8% of patients (8/74) died. Patients treated with direct oral anticoagulants (DOACs) had a significantly higher bleeding risk compared with those receiving low-molecular-weight heparin (LMWH) (50% vs. 8.1%, p 0.007). In detail, 4 patients developed bleeding episodes, of which 1 minor bleeding (epistaxis) and 3 major bleeding (melena and unspecified anemia). Of 66 patients with a low-intermediate Khorana score, 28 discontinued anticoagulation after chemotherapy cessation, without waiting 3 months. 7/8 patients with Khorana score ≥3 continued anticoagulation post-chemotherapy. CRT recurred in 4/69 patients (5.8%), all during ongoing chemotherapy. Three of the four patients had a Khorana score of 0 in the 3 rd month follow-up and therefore did not receive thromboprophylaxis. One had disease progression at the 3 rd month and continued reduced-dose DOAC at the recurrence. Recurrence and complications were comparable to published literature.

Conclusions. CRT is a frequent complication in cancer patients, and treatment with LMWH is a better choice than DOACs. A close integration of expertise in Angiology, Pain Management, and Oncology unit enables a personalized approach to complex oncology patients. This multidisciplinary strategy may facilitate the early diagnosis of cancer-related thrombosis (CRT) and potentially reduce the risk of recurrence and mortality.