

TEV E PATOLOGIE CARDIOVASCOLARI

LONG-TERM MANAGEMENT OF UPPER EXTREMITY CATHETER-RELATED THROMBOSIS IN FEMALE PATIENTS WITH CANCER: A RETROSPECTIVE COHORT STUDY.

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Background: Catheter-related thrombosis (CRT) of the upper extremities is a common complication in cancer patients requiring central venous catheters (CVCs). Despite its clinical relevance, optimal management remains uncertain due to limited high-quality evidence, particularly regarding the duration and intensity of anticoagulation.

Objectives: To evaluate the efficacy and safety of long-term anticoagulation in cancer patients with confirmed upper extremity CRT.

Methods: We retrospectively analyzed 113 female cancer patients with ultrasound-confirmed upper extremity CRT, treated at the Thrombosis Clinic of the Agostino Gemelli Polyclinic Foundation IRCCS between Nov 2022 and Jan 2025. The predominance of female patients (113/128) was due to the clinic's close collaboration with the Day Hospital of Female Tumors; thus, the analysis focused solely on women for population uniformity. Patients received therapeutic anticoagulation with low-molecular-weight heparins (LMWHs), fondaparinux, or direct oral anticoagulants (DOACs) for ≥ 3 months. Effectiveness was assessed by venous thromboembolism (VTE) recurrence and recanalization rates; safety by bleeding events classified per ISTH criteria as major bleeding (MB) or clinically relevant non-major bleeding (CRNMB).

Results: Mean age was 56.8 ± 13.3 years. Cancer types included ovarian (37.2%), breast (32.7%), endometrial (16.8%), cervical (4.4%), colorectal (4.4%), and others (3.6%). CVC

types were peripherally inserted central catheters (PICC, 19.5%), chest ports (46.0%), and arm ports (34.5%). Median follow-up was 568.5 days (IQR 300–910). In the first 3 months, 69.5% received parenteral therapeutic anticoagulation, 14.8% full-dose DOACs, and 15.6% subtherapeutic parenteral anticoagulation. Between months 3–6, full anticoagulation rates declined; beyond 6 months, reduced-dose DOACs were used in 80.9% of patients.

Four VTE recurrences occurred overall. No recurrences were observed in the first 3 months; two occurred between months 3–6 (1.9% incidence) and two beyond 6 months (2.1%). Total VTE recurrence rate was 0.5 events/100 person-years. Recanalization was complete in 32.8% by 3 months, 58.3% by 6 months, and 61.8% thereafter.

Bleeding events were not negligible. In the first 3 months, 4 CRNMBs occurred (2.7%). Between months 3–6, there was 1 MB (1.9%) and 3 CRNMBs (2.8%). After 6 months, 1 MB (1.0%) and 5 CRNMBs (5.2%) were reported. Overall bleeding rate (MB + CRNMB) was 1.9 events/100 person-years.

Conclusion: Long-term anticoagulation in cancer-associated upper extremity CRT appears effective in preventing VTE recurrence. However, bleeding risk increases progressively beyond the initial treatment phase. Individualized decisions regarding duration and intensity of anticoagulation are crucial to balance thrombosis prevention with bleeding complications.

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