ANTICOAGULANT TREATMENT

RISK OF VENOUS THROMBOEMBOLISM AFTER REMOVAL OF AN UPPER EXTREMITY CENTRAL CATHETER ASSOCIATED WITH A DEEP VEIN THROMBOSIS IN CANCER PATIENTS

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Background. Removal of a central venous catheter (CVC) is often considered when catheter-associated upper extremity deep vein thrombosis (CRT) is diagnosed, whereas guidelines suggest not removing the catheter as long as it is in use, functional, well-positioned with a proximal extremity at the right atrial superior vena cava junction, and non-infected. However, it is unknown what is the best strategy in cancer patients with CRT.

Aim. To evaluate the effectiveness of removal vs. retaining of the thrombosed catheter.

Methods. This was a prospective, single center study. We enrolled 233 participants (age: 56.8±16.6y, female: 58.4%) with cancer (metastatic cancer: 39.1%) and CRT. The follow-up was 12 months and the primary end-point was the composite measure of recurrent CRT and pulmonary embolism (PE).

Results. All the patients were treated with enoxaparin for 3 months, of whom 22 (9.4%) underwent CVC removal ≤7 day from the diagnosis, 44 (18.9%) underwent CVC removal between 8and 30 days, 116 (49.8%) underwent CVC removal >30 days. A new CVC was inserted in 56 patients (24%). During the follow-up, there were 1 PE (2.4/100 patient-years, 95%CI: 0.4-12.6) and 9 CRT (22.0/100 patient-years, 95%CI: 12.0-36.7) recurrences patients that retained the CVC, no PE and 2 upper extremity thrombosis recurrences (1.6/100 patient-years, 95%CI: 0.5-5.8) in patients that underwent CVC removal, and 2 PEs (4.9/100 patient-years, 95%CI: 1.4-16.1) and 17 CRT recurrences (41.4/100 patient-years, 95%CI: 27.8-56.6) in patients that underwent catheter removal and insertion of a new CVC. The insertion of a new CVC sharply increased the risk of VTE recurrences (HR 6.11, 95% CI: 2.96–12.6, p<0.001).

Conclusions. The maintenance of the thrombosed catheter is justified and associated with less VTE risk then removing the thrombosed catheter and inserting a new one.