

ANTICOAGULANT TREATMENT

PREDICTORS OF ONE-YEAR MORTALITY IN NEWLY DIAGNOSED METASTATIC BREAST CANCER: THE PROGNOSTIC ROLE OF HEMOSTATIC BIOMARKERS AND EARLY THROMBOEMBOLISM

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Introduction. A well-known connection exists between cancer and a prothrombotic state, where hemostatic biomarkers can signal disease progression and survival beyond just thrombosis. For metastatic breast cancer patients, identifying clinical and biochemical factors affecting short-term survival is vital for tailored treatment and better prognostic predictions.

Aim. To evaluate the cumulative incidence of 1-year mortality and identify clinical characteristics and hemostatic biomarkers that independently predict mortality risk in patients with newly diagnosed metastatic breast cancer (MBC).

Methods. This observational multicenter study enrolled patients with newly diagnosed MBC before chemotherapy as part of the HYPERCAN project. At baseline, clinical characteristics like ECOG status and molecular subtype were recorded, and hemostatic biomarkers (D-dimer, fibrinogen, FVIII, F1+2, thrombin generation) were measured. Patients were followed for 1 year to assess mortality. Survival analysis used Cox models; univariable analysis identified potential predictors, and multivariable forward selection determined independent risk factors.

Results. A cohort of 189 patients was prospectively moni-

tored. The cumulative one-year mortality was 12%. Univariable analysis identified elevated leukocyte counts, lower progesterone receptor expression, ECOG status ≥ 2 , and the triple-negative (TN) molecular subtype as clinical predictors of mortality. Conversely, targeted therapy, tamoxifen, and aromatase inhibitors were protective. Regarding hemostatic biomarkers, high baseline levels of D-dimer, fibrinogen, and FVIII were independent predictors of death. In the multivariable model, the strongest independent predictors were the TN subtype, elevated leukocytes, and FVIII levels. Additionally, VTE occurring within the first six months was associated with a 3-fold increase in the risk of one-year mortality.

Conclusions. One-year mortality is significantly influenced by biological subtype, inflammatory markers, and baseline coagulation profiles. The TN subtype and elevated FVIII emerged as particularly potent independent predictors of poor prognosis. Furthermore, the strong correlation between early VTE and a threefold increase in mortality risk underscores the critical importance of thromboprophylaxis strategies. These findings suggest that baseline hemostatic profiling may offer valuable prognostic insights beyond traditional clinical parameters.