

EPIDEMIOLOGY

SYMPTOM BURDEN IN PATIENTS WITH CANCER AND THROMBOEMBOLISM: A POPULATION-BASED MATCHED COHORT STUDY

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Introduction. The impact of arterial (ATE) and venous thromboembolism (VTE) on cancer symptom assessment and symptom burden is not well characterized.

Aims. To compare use of the Edmonton Symptom Assessment System (ESAS) at regional cancer centers and to evaluate symptom progression in patients with cancer who develop ATE or VTE versus matched controls.

Methods. We conducted a population-based, retrospective matched cohort study in Ontario, Canada including adults (≥ 18 years) with a new cancer diagnosis (2007-2021). Patients with ATE or VTE within 6 months after cancer diagnosis were matched to controls without ATE or VTE (1:5) based on age, sex, cancer site, and year of cancer diagnosis. The index date was 6 months following cancer diagnosis date. We measured and compared ESAS uptake rate per 100 person-days at 1 year. Relative rates (RR) were estimated using adjusted multivariable Andersen Gill models for recurrent events. We implemented a Markov multistate model to examine symptom severity progression over time for 5 symptoms (pain, anxiety, depression, lack of wellbeing, shortness of breath) by classifying them as: none (ESAS score=0), mild/moderate (ESAS score=1-6), severe (ESAS score=7-10), or death.

Results. The ATE cohort included 7039 patients with ATE and 35195 controls (mean age 70 years, 36% female). Patients with ATE had a lower ESAS uptake rate (0.31 vs. 0.38 per 100 person-days; RR 0.81) despite a higher cancer center visit rate (2.11 vs. 1.96 per 100 person-days, RR 1.08). Baseline symptom severity states were similar between patients with ATE and controls. Patients with ATE had a higher odds of worsening severity across all symptoms versus controls. The VTE cohort included 3002 patients with VTE and 15010 controls (mean age 64 years, 54% female). Patients with VTE had a higher ESAS uptake rate (0.62 vs. 0.43 per 100 person-days; RR 1.44) and a higher cancer center visit rate (3.49 vs. 1.99 per 100 person-days; RR 1.75). Baseline symptom severity states for pain, lack of wellbeing and shortness of breath were worse for VTE patients versus controls. Patients with VTE had a higher odds of worsening severity in all states and across all symptoms versus controls.

Conclusions. Patients with newly diagnosed cancer and ATE had lower ESAS uptake versus, while those with VTE had higher ESAS uptake versus controls. Cancer symptom progression was worse in patients with thrombosis supporting the importance of these events and the use of thromboprophylaxis.