Abstract

The Integrated Palliative Care Approach in a Curative Setting on Pain Management in Patients with Metastatic Breast Cancer: A Time-to-Event Analysis

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Introduction. Pain management in patients with metastatic breast cancer, through the integration of palliative care within a curative setting, is a critical research area. Understanding pain trajectories in hospitalized patients is essential to enable early palliative care activation, aiming to improve symptom control, quality of life, and resource use. The aim of this study was to evaluate pain trajectories and time to pain resolution in hospitalized patients with metastatic breast cancer, exploring differences between clinically distinct patient clusters.

Methods. A retrospective study was conducted using 2018 data from 161 patients hospitalized for metastatic breast cancer in a medical oncology department. Nursing assessments identified key symptoms, including pain. Longitudinal trajectory analysis revealed two groups: the red cluster, characterized by greater variability and intensity of symptoms and associated with admissions for active chemotherapy, and the blue cluster, characterized by more stable and moderate symptoms, slightly longer hospital stays, and admissions related to symptom management of metastatic disease. A time-to-event analysis was performed to estimate pain resolution.

Results. Mean time to pain resolution was 3.8 days (standard error 0.39; 95% CI: 3.0–4.5), with a median of 2 days (standard error 0.06; 95% CI: 1.9–2.1). Significant differences emerged between clusters: the red cluster showed faster pain resolution than the blue cluster, suggesting the potential effectiveness of personalized, patient-centered strategies.

Discussion. Findings suggest that early integration of palliative care into oncological pathways may improve pain management in specific patient subgroups. This supports revising protocols to include more frequent assessments and early, personalized, multimodal interventions. Limitations include the retrospective design and variability in pain perception, highlighting the need for prospective studies. Nonetheless, the findings support the integration of palliative care into oncology pathways to

improve patients' quality of life.

Keywords: Pain Management, Integrated Palliative Care, Time-to-Event Analysis

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