Symptom Clusters in Patients With Pancreatic Cancer Undergoing Surgical Resection: Part II

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OBJECTIVES: To explore the relationship between 16 symptom clusters (SCs), clinical and demographic influencing factors, and clinical outcomes over time in patients with pancreatic cancer (PC) undergoing surgical resection.

SAMPLE & SETTING: 143 patients with stage II PC undergoing surgical resection were recruited to participate in this longitudinal, exploratory study conducted at Thomas Jefferson University Hospital, a National Cancer Institute–designated cancer center.

METHODS & VARIABLES: Quality of life was measured preoperatively and at three, six, and nine months postoperatively. Statistical methods included simple linear and Cox proportional hazard regression.

RESULTS: Preoperative pain was significantly associated with the pain–gastrointestinal SC, and preoperative worry was significantly associated with the mood SC. The strongest negative association with emotional well-being across all study time points was found with the preoperative mood SC. The insomnia–digestive problems SC and the nutritional problems SC demonstrated a trend toward poor survival.

IMPLICATIONS FOR NURSING: Findings provide evidence that preoperative worry and pain are associated with SC severity and that SCs may have a detrimental effect on quality of life and survival in patients with PC undergoing surgical resection.

Patients with pancreatic cancer (PC) experience a wide range of symptoms as a result of the cancer itself and its treatments. Commonly reported PC symptoms include fatigue, pain, weight loss, nausea, anorexia, constipation, diarrhea, trouble digesting food, insomnia, depression, anxiety, and symptoms of diabetes (Huang et al., 2000; Noquez, 2008; Reyes-Gibby et al., 2007; Sun et al., 2008; Yeo et al., 2012). Patients with PC were found to experience some of the highest levels of psychological distress, fatigue, and pain when compared to patients with other cancer types (Carlson et al., 2004; Noquez, 2008; Zabora, BrintzenhofeSzoc, Curbow, Hooker, & Piantadosi, 2001). Evidence suggests that symptoms rarely occur alone; in fact, patients undergoing surgical resection for PC experience, on average, 5–10 symptoms simultaneously (Yeo et al., 2012).

The presence of two or more interrelated, concurrent symptoms that may or may not have a common causative mechanism is called a symptom cluster (SC) (Dodd, Miaskowski, & Lee, 2004; Kim, McGuire, Tulman, & Barsevick, 2005). SCs have been identified in patients with virtually every cancer type, including patients with breast (Sullivan et al., 2018), ovarian (Huang et al., 2016), prostate (Dirksen, Belyea, Wong, & Epstein, 2016), lung (Franceschini, Jardim, Fernandes, Jamnik, & Santoro, 2013), colorectal (Agasi-Idenburg, Thong, Punt, Stuiver, & Aaronson, 2017), and PC (Yeo et al., 2012). Patients with cancer experience SCs before (Browall et al., 2017; Kim, Barsevick, & Tulman, 2009), during (Kim, Barsevick, Tulman, & McDermott, 2008; Sullivan et al., 2018), and even years after treatment (Zucca, Boyes, Linden, & Girgris, 2012).

The presence or severity of SCs has been found to be influenced by several demographic and clinical factors: age, gender, race/ethnicity, marital status,