Symptom cluster

A symptom cluster is defined as consisting of 2 or more symptoms that are related to each other and that occur together. Symptom clusters are composed of stable groups of symptoms, are relatively independent of other clusters, and may reveal specific underlying dimensions of symptoms. Relationships among symptoms within a cluster should be stronger than relationships among symptoms across different clusters. Symptoms in a cluster may or may not share the same etiology. Symptom should be broadened to include both subjective (self-reported) symptoms and objective (observed) signs. Implications for researchers include the need to use a clear definition, determine the optimal methods of identifying etiology and nature of symptom clusters in various populations, assess the clinical utility of symptom clusters, and test interventions. Implications for practitioners include the need to comprehensively assess symptoms over the entire cancer trajectory, select interventions that target single and multiple symptoms, and evaluate outcomes that include quality of life and economic variables [1)].

The aims of a study were to identify symptom clusters in patients with high-grade brain cancers and to determine the relationship of each cluster with the performance status and quality of life (QOL) during concurrent chemoradiotherapy (CCRT).

Symptoms were assessed using the Memorial Symptom Assessment Scale, and the performance status was evaluated using the Karnofsky Performance Scale. Quality of life was assessed using the Functional Assessment of Cancer Therapy-General. This prospective longitudinal survey was conducted before CCRT and at 2 to 3 weeks and 4 to 6 weeks after the initiation of CCRT.

A total of 51 patients with newly diagnosed primary malignant brain cancer were included. Six symptom clusters were identified, and 2 symptom clusters were present at each time point (ie, “negative emotion” and “neurocognitive” clusters before CCRT, “negative emotion and decreased vitality” and “gastrointestinal and decreased sensory” clusters at 2-3 weeks, and “body image and decreased vitality” and “gastrointestinal” clusters at 4-6 weeks). The symptom clusters at each time point demonstrated a significant relationship with the performance status or QOL.

Differences were observed in symptom clusters in patients with high-grade brain cancers during CCRT. In addition, the symptom clusters were correlated with the performance status and QOL of patients, and these effects could change during CCRT [2)].

The purposes of a study were to identify and compare symptom clusters in patients with meningioma and glioma, and to assess and compare predictors of quality of life (QoL) in both patient groups.

Data were collected using the MD Anderson Symptom Inventory brain tumor module, the Functional Assessment of Cancer Therapy-General, and the Karnofsky Performance Scale (KPS). Of the 158 participating patients, 77 had meningioma and 81 had glioma.

Four symptom clusters were identified with 55.4% total variance in patients with meningioma. These clusters were 1) physical, 2) cognitive, 3) elimination-appearance, and 4) motor-sensory symptoms. In patients with glioma, four clusters with a total variance of 67.3% were identified: 1) treatment-related, 2) cognitive, 3) appearance-elimination, and 4) gastrointestinal symptoms. Predictors of QoL were KPS score ($\beta = 0.41$, $p < .001$), cognitive symptom cluster ($\beta = -0.36$, $p < .001$), and physical

symptom cluster (β = -0.32, p = .001) in patients with meningioma whereas treatment-related symptom cluster (β = -0.55, p < .001) was identified as the predictor of QoL in patients with glioma.

This study demonstrates that the type and composition of symptom clusters differed between patients with meningioma and glioma. In addition, data provide evidence that even when the participants reported mild symptoms, these clusters could be used to predict QoL in patients with meningioma and glioma [3].

1)
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3)
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