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Symptom clustering in advanced cancer

Walsh D, Rybicki L. Support Care Cancer, 2006; 14: 831-836

People with advanced cancer often experience several concurrent debilitating symptoms, yet most symptom research focuses on the study of individual symptoms. The objective of this study was to identify the presence and composition of symptom clusters using specific statistical techniques. A secondary analysis of data was undertaken of symptom severity scores for 25 high prevalence symptoms obtained from 922 consecutively recruited patients in the Palliative Medicine program at Cleveland Clinic.

Cluster analysis resulted in the identification of seven symptom clusters:

1. fatigue: anorexia-cachexia cluster: easy fatigue, weakness, anorexia, lack of energy, dry mouth, early satiety, weight loss, taste changes
2. neuropsychological cluster: sleep problems, depression, anxiety
3. upper GI cluster: dizzy spells, dyspepsia, belching, bloating
4. nausea and vomiting cluster: nausea, vomiting
5. aerodigestive cluster: dysphagia, dyspnoea, cough, hoarseness
6. debility cluster: oedema, confusion
7. pain cluster: pain, constipation

The authors speculate that gaining a better understanding of such symptom clusters may have significant clinical implications, including:

- identifying distinct pathophysiological mechanisms for concurrent symptoms
- identifying common pathophysiological mechanisms for different symptoms
- targeting relief of one symptom may prevent or reduce another symptom in that cluster
- avoidance of multiple symptom control drugs that help certain problems but exacerbate others.

These hypothesised implications of symptom clusters are yet to be examined, but the concept does have some initiative appeal. Undertaking studies to identify causal mechanisms for identified symptom clusters, or to test pharmacological and non-pharmacological interventions to ameliorate clusters of symptoms would require complex research designs. Such studies may, however, have the potential to achieve some important breakthroughs in palliative symptom management by enabling development of more focused symptom assessment processes and more appropriately targeted interventions.

This study reported on data collected at one time point only. Further research is also needed to confirm the existence of symptom clusters in different populations, and to examine the stability of symptom clusters as disease progresses. Research into symptom clusters is relatively new. Identifying appropriate research designs and statistical methods for determining symptom clusters is also needed.

Reviewer

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Patsy holds the position of Acting Director for Queensland Health's Centre for Palliative Care Research and Education, a statewide service focused on improving the quality of palliative care services in Queensland through research and education. Patsy is also jointly appointed as Professor of Nursing at Queensland University of Technology, where she is subject area coordinator for cancer nursing programs.

Patsy has extensive experience as a clinical nurse and educator in cancer and palliative care. She is currently undertaking studies evaluating psychoeducational interventions for people with cancer experiencing cancer pain, breathlessness, and fatigue.