20: Explaining how symptoms cluster together in advanced stages of chronic kidney disease

Hayfa Almutary[1], Clint Douglas[1], Ann Bonner[1]

[1] School of Nursing, Queensland University of Technology, QLD

Background

Symptom burden is high in chronic kidney disease (CKD) due to multiple symptoms affecting everyday life. Symptoms, however, are known to form clusters in cancer and other chronic disease but little is known about CKD symptom clusters.

Aim

To explore symptom clusters in advanced stages of CKD.

Methods

Using a cross-sectional design, 436 people with advanced stages of CKD completed the Chronic Kidney Disease - Symptom Burden Index which assesses the multidimensional nature of 32 symptoms. Exploratory factor analysis was used to identify symptom clusters. A high cutoff of 0.50 for factor loading was used for all analyses. Core symptoms in each cluster were determined based on stability across dimensions and clinical plausibility.

Results

Participants were mostly men (53%) with a mean age of 48 years (*SD*±14.86) and receiving dialysis (75.5%). Five symptom clusters were identified across all symptom dimensions (occurrence, distress, severity and frequency); namely fluid volume symptoms, neuromuscular symptoms, gastrointestinal symptoms, sexual symptoms, and psychological symptoms. Several symptoms were also interconnected with multiple clusters. Fatigue cross loaded onto all five clusters, whereas sleep disturbance and restless leg symptoms cross-loaded across three clusters.

Conclusion

Adopting a symptom cluster approach is a promising method to advance symptom assessment and management in CKD. Routine clinical assessment and management strategies targeted at the cluster level should have synergistic effects in reducing symptoms. Fatigue is a highly prevalent and pervasive symptom for those with CKD that is interconnected with global symptom burden, suggesting better management of multiple symptom clusters may also reduce fatigue.