The Effects of Supportive Care Interventions with Psychotherapeutic and Exercise Approaches on Depressive Symptoms Among Patients with Lung Cancer: A Meta-Analysis

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Abstract : Objective: To examine the effects of supportive care interventions on depressive symptoms in patients with lung cancer. Methods: The databases of Cochrane Central Register of Controlled Trials (CENTRAL), Ovid EMBASE, PubMed, and Chinese Electronic Periodical Services (CEPS) were searched from their inception until September 2015. We included the studies with randomized controlled trial design that compared standard care with supportive care interventions using psychotherapeutic or exercises approach. The standardized mean differences (SMD) (Cohen's d) were calculated to estimate the treatment effects. The Cochrane Risk of Bias Tool was used for quality assessment and subgroup analysis was conducted to identify possible sources of heterogeneity. Results: A total of 1472 patients with lung cancer were identified. Compared with standard care, the overall effects of all supportive care interventions significantly reduced depressive symptoms (SMD = -0.74 with 95% CI = -1.07 to -0.41), and the effect was maintained at the 4th, 8th, and 12th weeks of follow-up. Either psychotherapy combined with psychoeducation or exercise alone produced significant improvements in depressive symptoms, while psychoeducation alone did not. The greater improvements in depressive symptoms occurred in lung cancer patients with severe depressive symptoms at baseline, total duration of interventions of less than ten weeks, and intervention provided through face-to-face delivery. Conclusions: Psychotherapy combined with psychoeducation can help patients manage the causes of depressive symptoms, including both symptom distress and psychological trauma due to lung cancer. Exercise can target the impaired respiratory function that is a cause of depressive symptoms in lung cancer patients.

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