Abstract

Background. Depression is believed to influence the course of breast cancer but evidence remains inconclusive. This meta-analytic study aims at exploring associations between depression and breast cancer progression regarding to mortality and breast cancer recurrence, and testing if these associations vary by study characteristics, sample characteristics and prognostic factors. Method. Using Pubmed to identify studies investigating impacts of depression on breast cancer prognosis by comparing mortality or recurrence of depressed group to non-depressed group in Cox model. Comprehensive Meta-Analysis software was employed to conduct all analyses. Result. Depression was associated with a significant elevated mortality and recurrence. The hazard ratio was 1.46 (95% CI: 1.08-1.97) in crude overall mortality with moderate heterogeneity (I^2= 68.0%); 1.26 (95% CI: 1.21–1.32) in adjusted overall mortality with no evidence of heterogeneity; 1.18 (95% CI: 1.06–1.33) in adjusted breast cancer mortality with small heterogeneity (I^2= 23%); 1.26 (95% CI: 1.06–1.48) in crude recurrence with small heterogeneity (I= 23%) and 1.24 (95% CI: 1.10–1.40) in adjusted recurrence with no evidence of heterogeneity. No significant possibility of publication bias was detected by Begg and Mazumdar rank correlation (p = 0.67) and Egger regression (p= 0.06). No significant differences in adjusted overall mortality among subgroups concerning study characteristics, sample characteristics and adjustment of varied prognostic factors except a significant decrease in adjusted overall mortality was found in subgroup with adjustment of education level (p=0.04). Conclusion. Despite some limitations, this paper reassured role of depression on a poorer breast cancer prognosis. Early detection and treatment of depression might not only enhance psychological well-being but also possibly extend survival among breast cancer patients. Further research is warranted regarding the benefit of psychotherapies in achieving maximum possible survival.

Keywords: depression, breast cancer, mortality, recurrence, Cox model