Aim: The relationship between striking life events, an important stress and acute anxiety disorder, and the occurrence of primary breast cancer is unclear. Based on our previous meta-analysis, some evidences have showed some evidences, the current case-control study was designed to investigate the relationship between striking life events and development of breast cancer.

Methods: A total of 265 eligible primary breast cancer patients were selected in our department and 265 control cases were enrolled from medical healthy center, aged match, and free of mental illness or breast cancer. All cases were asked to complete a risk factors questionnaire including striking life events, age, BMI, menarche, stress, menopause, breast cancer history, oral contraceptive pills, and breast operation history. Logistic regression analysis was used to estimate the odds ratios (ORs) with 95% confidence intervals (CIs).

Results: 39 breast cancer patients were found to be suffered from striking life events, in which seven women were hit by two events, so that 46 striking life events were recorded. 24 control cases were exposed to striking life events, in which only one woman was hit by two events, so that 25 striking life events were recorded. The number of striking life events showed a significant difference between the patients and control (P = 0.04). Our data revealed a 1.726-fold or 1.811-fold increase in hazard ratio of breast cancer incidence with striking life events (95% CI 1.005 - 2.965, P < 0.05; 95% CI 1.021 - 3.212, P < 0.05, respectively) with adjustment by age or by age, BMI, and late age at menopause. High BMI or family history of breast cancer showed a positive risk of breast cancer incidence (odd ratio 1.680, 95% CI 1.258 - 2.196, P < 0.05; or odd ratio 2.244, 95% CI 1.065 - 4.729, P < 0.05, respectively), and late age at menopause revealed a negative risk (odd ratio 0.513, 95% CI 0.303 - 0.868, P < 0.05). In subgroup of menarche above 13 years, the population with life compression demonstrated a 1.612-fold increase in hazard ratio of breast cancer incidence as compared with that without life compression (95% CI 1.038 - 2.503, P < 0.05).

Conclusions: Our findings suggested a strong association of striking life events with breast cancer occurrence.

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