

Psycho-Oncology Division

Introduction

The aim of the Psycho-Oncology Division is to develop human-centered care to restore, maintain, and improve the quality of life of the patient and their family facing cancer, a life-threatening illness. The Division focuses on the mechanism of the relationship between cancer and the mind through the neuro-psychiatric, psychosocial, and behavioral sciences.

Depression is one of the commonest expressions of psychological distress in cancer patients. Since it is poorly recognized and not appropriately treated, screening cancer patients for depression is important. This study attempted to assess the performance of several screening instruments for adjustment disorders (ADs) and major depression (MD) among terminally ill Japanese cancer patients (107). Two hundred and nine consecutive patients were assessed for ADs and MD using a structured clinical interview at the time of their registration with a palliative care unit, and two single-item questions (“Are you depressed?” and “Have you lost interest in things generally?”). The Hospital Anxiety and Depression Scale (HADS) were then administered. Screening performance was investigated by calculating sensitivity, specificity, the positive predictive value, negative predictive value, likelihood ratio, and stratum-specific likelihood ratios. When the screening target included both AD and MD, the HADS proved to be a more useful screening method than the single-item interviews. Regarding screening for MD, single-item interviews and the HADS both proved to show useful screening performance. Different screening instruments may be recommended depending on the depressive disorders and specific populations.

MD and minor depression (mD) in cancer patients are frequently seen as the first depressive episode in a patient’s life in spite of there being no specific neurological evidence for this. Subjects were 51 breast cancer survivors (BCS) who had no history of depressive episodes before the cancer diagnosis (11 BCS with a history of a first mD after cancer diagnosis, 11 BCS with a history of a first MD after cancer diagnosis, and 29 BCS with no history of any depressive episode after cancer diagnosis). We analyzed the prefrontal cortex (PFC) and amygdala volumes in a 1.5-tesla magnetic resonance imaging scanner (108). We characterized the structural correlates of depression using two complementary approaches. The first was voxel-based morphometry (VBM) that allowed us to scan the entire brain for reactive gray matter deficit. The second was classical volumetry focusing on the amygdala. Voxel-based morphometry revealed no brain region, including PFC, for which volume was significantly different among the three groups; however, there were trend-level differences in the left amygdala volume among the three groups as revealed by the manual tracing method. The left amygdala volumes in the subjects with a first mD and/or MD were significantly smaller than in those with no history of any depressive episode. It might be suggested that amygdala volume was associated with a first mD and/or MD after cancer diagnosis.

The mechanisms of refractory symptoms remain unclear (109-114). Longitudinal changes and predictive factors for psychological distress were important to investigate. Among 85 newly diagnosed non-small cell lung cancer (NSCLC) patients, most forms and the total of the POMS subscales persisted during the subsequent clinical

course (115). Only a higher total mood disturbance after cancer diagnosis was a significant predictor of distress at 6 months. The findings suggest that early intervention for the initial psychological distress itself after cancer diagnosis is one way to prevent and/or reduce subsequent psychological distress in advanced NSCLC patients.

The psychiatric diagnoses and background factors of family members of cancer patients were examined by analyzing the consultation data of patients referred to the Psychiatry Division at the National Cancer Center Hospital East (116). Of a total of 1469 psychiatric consultations, 47 (3.2%) family members were referred, with 85% of them being spouses. The most common cancer site was the lung. Approximately one-half of the referred families encountered patients' end-of-life issues. The most common psychiatric diagnoses were ADs, followed by MD. These preliminary findings suggest that development of a comprehensive support system for cancer patient carers is an urgent issue in the clinical oncology setting in Japan.

Depression might be associated with poor survival among cancer patients. To investigate the association between depression and survival in surgically treated Japanese patients with NSCLC, a total of 229 patients with postoperative lung cancer were enrolled from June 1996 through April 1999 (117). Three months after surgery, the Structured Clinical Interview for DSM-III-R was used to assess the patient for depression. The follow-up period consisted of a total of 14342 person-months (median = 69 months). As of January 2004, 55 deaths had occurred within the follow-up period. A Cox regression was used to estimate the hazard ratio (HR) of mortality, adjusting for age, sex, smoking status, occasion of diagnosis, pathological stage and preoperative percentage forced expiratory volume in 1 s. The multivariate HR of survival for individuals with depression was 2.2 (95% confidence interval 0.8–

6.0) (P -value = 0.14), compared with individuals without depression. This prospective cohort study in Japan does not support the hypothesis that depression is associated with survival among NSCLC patients after curative resection, so further analysis involving a long-term follow-up period is needed (118, 119).

It has been suggested that marital status and social support are associated with survival in lung cancer. The presence and absence of confidants and the satisfaction level with these confidants were used as factors reflecting social support (120). With regard to marital status, the multivariable adjusted HR of unmarried patients versus married patients was 0.8 (95% confidence interval, 0.3–1.8) (P -value = 0.53) after controlling for potential confounding factors. Similarly, the multivariable adjusted HR of patients without confidants versus those with confidants was 1.0 (0.5–2.2) (P -value = 0.90), whereas the multivariable adjusted HR of the dissatisfied-with-confidants group versus the satisfied-with-confidants group was 0.7 (0.4–1.3) (P -value = 0.28). The present data do not support the hypothesis that marital status and social support are associated with survival in NSCLC.

Neuroticism is a trait marker of a depression-prone personality. A population-based prospective cohort study in Denmark was conducted to investigate the association between neuroticism and cancer survival (121). A significant association was found between neuroticism and risk of death (HR, 2.3 (95% CI.1.1–4.7); Linear trend P .0.04). This study showed that neuroticism is positively associated with cancer survival.

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