Do the Japanese Cancer Patients Receive an Appropriate Psychiatric Support at the Acute Care Hospitals?

—An Evaluation Trial by DPC Based Data—

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Abstract

Previous literatures have clarified that cancer patients tend to have depressive feelings and that they require supportive care for depression. We have tried to describe the actual situation of psychiatric care for the breast cancer patients among the acute care hospitals in Japan based on the DPC data. For this study, we have extracted 28,995 breast cancer cases (female patients only) from the DPC database (1st July 1 2010 to 31st October 2010). Based on this data set, we have counted the cases with depression and anxiety symptom as comorbidity or complication. Then we analyzed the depressive symptom related cares from the detailed process data (F file). Patient of 60–69 yr old is the largest population (7,985 cases; 27.5%) followed by 50–59 (6,791; 23.4%), 70 yr old and more (6,523; 22.5%) and 40–49 (5,804; 20.0%). The highest prevalence of depression related symptom was observed for young patient under 40 yr old (depression 3.6% and anxiety 3.2%). The percentages of patients with depression received psychiatric liaison care, antidepressants, and palliative care were 9.9%, 18.7% and 2.0%, respectively. These figures were 8.0%, 4.3%, and 0.7% for patients with anxiety symptom. The results have suggested that the Japanese breast cancer patient could not receive appropriate clinical services for mental problems.

Key words: DPC, breast cancer, depression, onco-psychiatric care

❖Introduction

Since 1981 cancer has been the first cause of death in Japan. Today one of the 2 Japanese experiences some kinds of cancers during one's life course. In June 2006, the Cancer Control Act was approved and the

law has been implemented since April 2007. The basic concepts of the law are 1) promotion of cancer research and utilization of research outcomes, 2) equalization of cancer medical services, and 3) development of cancer medical services to satisfy patients. Furthermore, according to this law, the Japanese government constructed the Basic Plan in order to promote Cancer Control Programs in June 2007, covering five fiscal years from 2007 to 2011. The Plan defines the basic concept of cancer control and aims to promote comprehensive and well-planned cancer control in Japan.

Most of the citizens regard cancer as an acute fatal

disease. However, cancer has become a kind of chronic disease because of continuous innovations of medical sciences targeting cancer, such as chemotherapy and related therapies for control of pain and other side effects. This means that cancer patients become to require not only cancer treatment but also QOL supportive care.

Especially, previous literatures have clarified that cancer patients tend to have depressive feelings and that they require supportive care for depression. Derogatis *et al*. reported that more than 50% of patients of cancer center had some kinds of mental problems, mainly depression and anxiety[1]. Considering this situation, the Cancer Control Act clearly defines the role of psychiatric care for the cancer patient.

In this article, the authors try to describe the actual situation of psychiatric care for the breast cancer patients among the acute care hospitals in Japan based on the DPC data.

❖ Materials and Method

Data for this study were extracted from the Japanese inpatient administrative claims database, the DPC database. The database was originally instituted as part of a national project to develop a Japanese case-mix classification system, which has been ongoing since 2002. The annual number of cases in the database is approximately 3 million. The database contains: i) main diagnoses, pre-existing comorbidities at admission and complications after admission which are coded with ICD-10 codes; ii) surgical procedures coded with Japanese original codes (K-codes), operation time and the performed date; iii) discharge status (dead or alive); and iv) a list of drugs and blood products used and the dates of use. Study approval was obtained from the Institutional Review Boards and the Ethics Committee of The Tokyo Medical and Dental University. Given the anonymous nature of the data collection process, informed consent was not required.

For this study, we have extracted 28,995 breast cancer cases (female patients only) from the DPC database (1st July 1 2010 to 31st October 2010). Based on this data set, we have counted the cases with depression and anxiety symptom as comorbidity or complication. Then we analyzed the depressive symptom related cares from the detailed process data (F file). For the prescription of antidepressants, we have established a master table as shown in Table 1. For the liai-

Table 1   Master table of antidepressants used in Japan (2010)

Antidepressant	Classification code
Tricyclic Antidepressants	
Amitriptyline	1179002
Imipramine	1174006
Trimipramine	1174005
Nortriptyline	1179004
Clomipramine	1174002
Nortriptyline	1174004
Dosulepin	1179027
Tetracyclic antidepressant	
Maprotiline	1179008
Amoxapine	1179001
Mianserin	1179033
Setiptiline	1179034
SSRI	
Paroxetine	1179041
Fluvoxamine	1179039
Sertraline	1179046
SNRI	
Milnacipran	1179040
Others	
Trazodone	1179037
Sulpiride	1179016

son care by psychiatrist and palliative care, there are specific codes for reimbursement in the tariff table. We counted the prevalence of these activities from the F file. Statistical analyses were conducted using IBM SPSS version 19.0 (IBM SPSS, Armonk, NY, U.S.A.).

❖ Results

Table 2 shows the prevalence of depression related symptom according to age category. Patient of 60–69 yr old is the largest population (7,985 cases; 27.5%) followed by 50–59 (6,791; 23.4%), 70 yr old and more (6,523; 22.5%) and 40–49 (5,804; 20.0%). The highest prevalence of depression related symptom was observed for young patient under 40 yr old (depression 3.6% and anxiety 3.2%).

Table 3 shows the prevalence of depression related symptom according to existence of surgical procedures. Patients without surgical procedures showed a statistically significant higher prevalence both for depression (4.1% vs. 1.8%) and anxiety (3.6% vs. 2.0%).

Table 4 shows the prevalence of depression

Table 2   Prevalence of depression related symptom stratified by age category

Age category		Depression	Anxiety	Total	
				N	%
− 40	N	69	61	1,892	6.5%
	%	3.6%	3.2%		
40–49	N	149	182	5,804	20.0%
	%	2.6%	3.1%		
50–59	N	150	151	6,791	23.4%
	%	2.2%	2.2%		
60–69	N	194	199	7,985	27.5%
	%	2.4%	2.5%		
70–	N	169	145	6,523	22.5%
	%	2.6%	2.2%		
Total	N	731	738	28,995	100.0%
	%	2.5%	2.5%		

Table 3   Prevalence of Depression related symptom according to existance of surgical prpcedure

Surgical procedure		Depression	Anxiety	Total
Yes	N	343	390	19,582
	%	1.8%	2.0%	100.0%
No	N	391	348	9,564
	%	4.1%	3.6%	100.0%
Total	N	734	738	29,146
	%	2.5%	2.5%	100.0%
p-value (Chi square test)		<0.01	<0.01	

Table 4   Prevalence of depression related care for patients with symptoms

		Depression	Anxiety	Total
Psyhiatric liaison care	N	73	59	734
	%	9.9%	8.0%	1
Antidepressants	N	137	32	734
	%	18.7%	4.3%	1
Palliative care	N	15	5	734
	%	2.0%	0.7%	1
Total case with symptom		734	738	

related care for patients with symptoms. The percentages of patients with depression received psychiatric liaison care, antidepressants, and palliative care were 9.9%, 18.7% and 2.0%, respectively. These figures were 8.0%, 4.3%, and 0.7% for patients with anxiety symptom.

❖Discussion

The present analysis has clarified that about 2.5% of breast cancer cases hospitalized in the DPC based acute care facilities have depression related symptoms. However, the percentages of patients with depression received psychiatric liaison care, antidepressants, and palliative care were 9.9%, 18.7% and 2.0%, respectively. These figures were 8.0%, 4.3%, and 0.7% for patients with anxiety symptom. The results have suggested that the Japanese breast cancer patient could not receive appropriate clinical services for mental problems. The prevalence was higher for the patient without surgical procedures. As this group of patients includes cases for in-hospital detailed examination and recurrent cases, the present result seems to be reasonable.

The relationship between the chronic diseases and depression attracts much concern. The WHO report estimated that depression would become the 2nd largest disease burden after cardiac diseases along with increase of chronic diseases[2]. Under the same perspective, the relationship between depression and cancer has been actively investigated. For example, Bodurka-Bevers et al. reported that 21% of cancer patients would experience some depression related symptom[3]. Ashbury et al. reported the prevalence of depression within the 2 yr after initial treatment according to the cancer type; 19% for breast cancer, 11% for colon cancer, 14% for ling cancer[4]. Another study suggested that most of the cancer patients in the cancer center received hypnotics but that only one percent of patient received antidepressants[5].

As one of the reasons why cancer patients with depressive symptom are not adequately treated, Endicott condemned the responsibility of physician in charge of cancer patients. According to his explanation, clinicians tend to regard that depressive condition is one of natural course of cancer patients and that there are little merits of systematic treatment for depressive symptom. However, the previous studies have clarified that active treatment of depression leads to positive attitude of patients for treatment[6, 7] and results in good prognosis. There is a study suggested that improvement of depressive would cause the amelioration of immunological status and improve resistance against cancer development[8]. Passik et al. have clarified that the use of a depression screening tool and antidepressants improve the recognition and treatment of depression in cancer patients[9]. All above cited literatures strongly suggest the importance of appropriate psychiatric care for cancer patients.

The situation that the present analysis clarified should be ameliorated immediately considering the fact that one of the 2 Japanese experiences some kind of cancers and one of the 3 died of cancers. However, it is reported that the number of psychiatrists has been decreasing in the acute care hospitals[10]. One of the reasons of this decrease is that the psychiatrists do not receive appropriate respect within the acute somatic care hospitals [10]. This situation must be changed. An enough economic evaluation for their liaison activity within the official tariff table must be one of the effective solutions, for example.

Several limitations must be considered when interpreting our results. First, we lacked precise information about comorbidity and complication. As the existence of depression is not used as a key for classification, it is possible that clinicians underreport its existence. It is very possible that the prevalence of depression symptom would be higher than the current results. Second, as the DPC database covers only in-patient, information of chemotherapies at out-patient services is not covered. This might cause a bias, because the in-hospital patients tend to be severer than out-patients both in somatic and mental condition. Finally, we could not evaluate the relationship between depression symptom and cancer stage because of impreciseness of data.

Despite the above mentioned limitation, our current results strongly suggest the necessity of promoting onco-psychiatric care in Japan.

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