



## A Study of Schizophrenic Patients Suffering from Cancer at Mental Hospitals in Prefecture A

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### Abstract

**Background:** This study aimed to grasp the current situations of the hospitalized schizophrenic patients with cancer at the prefectural level for the first time in Japan.

**Methods:** A questionnaire survey was conducted with nurses who had experiences in taking care of schizophrenic patients suffering from cancer whose primary complaint was mental and behavioral disorders as diagnosed according to the ICD-10 criteria.

**Results:** There were 90 thirty-year-old or older schizophrenic patients with cancer hospitalized at mental hospitals in prefecture A, including 44 men and 46 women. Patients sixty-five years or older had been hospitalized longer than those who were younger.

**Conclusion:** More than 70% of schizophrenic patients with cancer at mental hospitals died within 1-2 years of cancer diagnosis, half of them, without receiving any explanation about their cancer. The closer cooperation with general hospitals, with patients' siblings as their key persons, and reconsideration of the current cancer insurance which requires patient's consent to treatment are some of the issues which have emerged from this research. And only a few of them were given explanation about their cancer disease conditions before they received symptomatic treatment and died.

### Keywords

Schizophrenic patients; Cancer; Symptomatic

### Introduction

According to the 2012 Mental Health Report [1], there are 1,622 hospitals in Japan that have a psychiatric department, of which privately managed specialized mental hospitals account for 70% (1,086 hospitals). Among these single-department mental hospitals, the number of schizophrenic patients is larger than that of patients suffering from any other mental diseases [2].

To improve the situation, this study aims to conduct a basic research regarding the current status of treatment of schizophrenic patients with cancer at specialized mental hospitals in a selected prefecture and acceptance by the psychiatric department of general hospitals of such patients as one of the measures to improve cancer

treatment and palliative care at specialized mental hospitals in the prefecture.

### Research Approach and Methodology

#### Target area and subjects

The average number of patients hospitalized at mental hospitals per day out of every 100 thousand people according to demographics and health statistics in 2008 published by the Ministry of Health, Labour and Welfare was used as reference. According to the statistics, the nation-wide average number of patients hospitalized at mental hospitals per day out of every 100 thousand people is 240.6. Prefecture A, which has a figure (240.1) close to the nation-wide average value, was selected as the target area as a microcosm of Japan to grasp the nation-wide picture of this issue.

The subjects of study are schizophrenic patients with cancer who were diagnosed as having mental and behavioral disorder defined by ICD-10. Since it is not possible to gather information about their cancer disease development directly from patients, we distributed a survey form to psychiatric nurses who took care of the patients, and the results of the survey were used as valid data.

#### Survey period

It was from October 1, 2012 to November 30, 2013.

#### Method of survey

Earlier than this research, interviews with nurses working for psychiatric wards were conducted as a preliminary study. From the results of the interviews, the following 13 items were chosen.

The survey form has 13 items including: 1) sex of patient, 2) age when patient diagnosed with cancer, 3) total hospitalization period, 4) hospital ward where patient received treatment, 5) whether patient has disability certificate, 6) income, 7) site of cancer, 8) progress, 9) whether patient received explanation about cancer disease condition, 10) whether family received explanation about cancer disease condition, 11) whether to provide cancer treatment, 12) presence/absence of attendant, and 13) presence/absence of key person. The completed survey form was sent back in an enclosed envelope after firmly sealed.

#### Method of analysis

The responses to the above 13 items were input using Excel, and SPSS Ver. 21 was used as needed to tally figures.

#### Ethical consideration

The study was started after deliberations and approval at the Ethics Committee of Health Science University in September 2012 (Approval number: 2012 No. 8).

### Results

#### Cancer treatment at specialized mental hospitals and their acceptance of patients with cancer

In Prefecture A, there are two general hospitals with a psychiatric department (a total of 451 beds) and eight specialized mental hospitals

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(a total of 1,968 beds). Mental healthcare facilities are concentrated in the central part of the prefecture regardless of their form, and there are fewer such facilities in the eastern part of the prefecture. In Prefecture A, 81% of hospital beds in a psychiatric department are those at specialized mental hospitals, which account for an overwhelming percentage. Among specialized mental hospitals, one hospital has 100 beds or less, one hospital 101-199 beds, five hospitals 200-299 beds, and one hospital 300-399 beds, indicating more than half hospitals have around 200 beds.

In response to the question asking about hospitals that receive schizophrenic patients with cancer, no hospital had three or more receiving general hospitals, two hospitals two or more, four hospitals one or more, and two hospitals no receiving general hospital. In all cases, the recipient of schizophrenic patients with cancer was the psychiatric department of a general hospital regardless of whether it is located in or outside the prefecture. Half of the subject hospitals liaise with the psychiatric department of a general hospital and ask it to be a recipient. One general hospital with a psychiatric department answered that it can receive patients with serious mental symptoms, and five hospitals answered that they can receive psychiatric patients as long as they do not show excitement or restlessness.

Given this situation, it is speculated that the doctor at the recipient general hospital has the initiative about treatment, including presenting in advance conditions for receiving a schizophrenic patient with cancer to the patient, and that the primary doctor at the specialized mental hospital and the patient make a judgment on cancer treatment before they have enough time and opportunities to understand the cancer disease and mental symptoms.

### Outline of subjects

**Basic attributes of patients:** We distributed a survey form to 158 nurses working at specialized mental hospitals in Prefecture A. The number of respondents was 90 (collection rate 56.9%). Data obtained from these 90 nurses was used for the study.

Table 1 shows the basic attributes of 90 patients reported during the period from October 1, 2012 to November 30, 2013. Subject patients are all 30 years or older. There are 44 males and 46 females, with many males belonging to the 60-69 age groups (16 males, 36%). Elderly patients tend to spend a longer time in hospital.

Work experience reflects the general employment situation with males having more work experience than female, but only 55% of

male patients and 43% of female patient have work experience. 45% of males and 57% of females have no source of income.

### Disease condition of patients and therapeutic environment:

Table 2 shows the disease condition and therapeutic environment of schizophrenic patients having cancer. Female patients tend to stay in hospital longer than male patients. About 66% of both males and females were hospitalized in closed wards, and only three male patients and two female patients were receiving cancer treatment in a medical psychiatry unit. Also, patients who had been hospitalized for six years or longer received treatment in an open ward or medical-treatment ward more often than patients who had been hospitalized for less than five years.

As for sites of cancer, more than about 50% of male patients have stomach cancer (25%) or lung cancer (20%). These figures are consistent with the number of Japanese cancer patients by site in 2014. Among women, breast cancer accounts for 47% (nearly 50%) of cancer cases, followed by uterus cancer (13%) and liver cancer (11%). Among all cancer patients, breast cancer is the top cancer site, followed by large intestine, stomach, lung, and uterus. The current survey results indicate that the number of female large intestine cancer patients among subject patients is relatively small.

**Outcome of patients:** About 70% of both male and female schizophrenic patients with cancer died from cancer. On the other hand, 11 male patients (25%) and 9 female patients (20%) are receiving cancer treatment, of whom only 2 men and 4 women (less than 10%) recovered from the disease. This suggests that the death rate among schizophrenic patients with cancer is relatively high due to difficulty of deriving benefit from cancer treatment. Improving cancer screening rates should be further discussed to diminish this rate as pointed by Fujiwara [3].

**Explanation of cancer disease condition to patients and treatment:** According to the survey, 26 male patients and 16 female patients received an explanation of their cancer disease condition, while 18 male patients and 17 female patients did not. About 60% of both male and female patients received an explanation, and about 40% did not. In addition, 37 patients (66%) who had been hospitalized for 6 years or longer received an explanation, while 18 patients (53%) who had been hospitalized for less than 5 years did. The figures indicate that doctors gave an explanation to patients who had been hospitalized for 6 years or longer more often than to those who had been hospitalized for less than 5 years.

Table 1: Basic attributes of patients (Actual count).

		Sex		Period of hospitalization		Total
		Male	Female	1-5 Years	6 Years or longer	
		44	46	34	56	90
Age group	30-49 Yrs old	4	8	7	5	12
	50-59 Yrs old	10	11	8	13	21
	60-69 Yrs old	16	11	9	18	27
	70-79 Yrs old	9	10	6	13	19
	80 Yrs or older	5	6	4	7	11
Work experience	Yes	24	20	16	28	44
	No	20	26	18	28	46
Source of income	None	20	26	18	28	46
	Personal income	2	0	1	1	2
	Public pension	18	15	12	21	33
	Welfare	4	4	3	5	8
	Unknown	0	1	0	1	1

**Table 2:** Disease condition of patients and therapeutic environment (Actual count).

		Sex		Hospitalization period	
		Male	Female	1-5 Years	6 Years or longer
Period of hospitalization	1-5 Years	18	16	34	0
	6-15 Years	10	7	0	17
	16-25 Years	9	10	0	19
	26 Years or longer	7	13	0	20
Treatment ward	Open	13	11	7	17
	Closed	23	27	23	27
	Concurrent physical disease	3	2	2	3
	Medical-treatment	5	6	2	9

**Explanation of cancer disease condition to patients' families:** Explanation of cancer disease condition was given to 38 family members of male patients and 38 family members of female patients, or 80% or more of the patients' family members, and the duration of hospitalization did affect the figures (47 family members and 29 family members respectively). Primary doctors of psychiatry gave an explanation of cancer disease condition to patients' family members more often than to patients themselves. 23 male patients and 25 female patients, or about 50% of the patients, received cancer treatment, and the rest did not received cancer treatment.

**Key person:** 90% of the patients who had been hospitalized for 1-5 years had a key person, but slightly less than 80% of those who had been hospitalized for 6 years or longer had a key person. A brother or sister was the key person for 52% of male patients and 65% of female patients (each accounting for more than 50%). Compared to the ratio of parents as their key person (5%), the result indicates the needs for close communication to patients' siblings as cited by Arai [4].

**Other therapies/interventions prior to cancer treatment:** Prior to any cancer treatment, the nurses reported how observation was important to find any differences that occurred when they helped them with bath-taking or changing. Morphine injections were used when the patients seemed to be suffering from intolerable pain. Furthermore, at the end of their lives, the nurses were the ones who sat by the patients holding their hands in order to calm them.

## Discussion

### Situation surrounding specialized mental hospitals

More than 50% of the psychiatric departments at general hospitals restrict acceptance of schizophrenic patients who were diagnosed with a cancer at a specialized mental hospital. One of the reasons that widely range is that complicated symptoms in schizophrenic patients with cancer are very complicated and physical symptoms are less likely to be displayed. Other reasons are that psychiatric healthcare institutions, regardless of their form, are concentrated in the central part of the prefecture and the eastern part has only a few of them, and that there is a large gap in coordination between the psychiatric department of a general hospital and a specialized mental hospital depending on the facilities.

When a schizophrenic patient is diagnosed with cancer at a specialized mental hospital, since an average of only one full-time physician or surgeon is on duty at all times, it takes enormous time and labor for the diagnosis and to look for a general hospital that can accept the patient, which suggests the difficulty of handling such patients.

According to the current survey, less than 10% of schizophrenic patients with cancer were receiving treatment in the physical complication ward of a mental hospital. In areas of Prefecture A where there are a small number of general hospitals with a psychiatric department, when a schizophrenic patient with cancer enters the department, it is possible to estimate the duration necessary for cancer treatment by researching the average number of days for treatment, etc. and the number of beds in the psychiatric department at a general hospital. If a number of such researches can be conducted in other prefectures, it will be possible to more adequately show what kind of psychiatric treatment is necessary for schizophrenic patients with cancer.

### Situation surrounding schizophrenic patients with cancer

According to the current survey, about 7% of schizophrenic patients at specialized mental hospitals in Prefecture A were diagnosed with cancer. According to the results of Health Labour Sciences Research (2007), 5.6% of hospitalized schizophrenic patients are diagnosed with cancer. In a survey conducted in Shimane Prefecture conducted by Inagaki3, it was reported that about 1% was diagnosed with cancer. Since physical complications in schizophrenic patients widely vary from an endocrine metabolic disease to a cardiovascular disease, to a gastrointestinal disease, etc., it is rather difficult to achieve an accurate diagnosis, but as schizophrenic patients are increasing aging, cancer rates are on the increase [5].

**Cancer disease condition:** More than 70% of both male and female schizophrenic patients died within 1-2 years after being diagnosed with cancer. The influence factors include deterioration of cognitive function of the patient to realize physical abnormality and indifference caused by apathia. 46.7% of the female patients were diagnosed with breast cancer, and 13.0% with uterine cancer, which totaled more than 50%. The reason for this is early discovery of abnormalities such as bleeding as a sign of cancer through observation of physical symptoms by the psychiatric nurse when he/she helped the schizophrenic patient with bath-taking or changing.

**Issues concerning explanation of cancer disease condition:** Due to the difficulty of understanding schizophrenia, a psychiatric disease, and residual schizophrenia, the rate of patients who received an explanation of cancer disease condition was lower compared with normal cancer patients. According to responses by psychiatric nurses, it was found that 60% of the patients received an explanation while 80% or more of the family members received an explanation [6].

Considerations about changing psychiatric symptoms after the schizophrenic patient was informed of cancer are considered to have much to do with this. Uwadaira cited a fact that since troubled

behaviors such as hallucination, delusion, and impulsive action occur frequently after a schizophrenic patient received an explanation on his/her cancer disease condition, and that since the doctor at a general hospital prioritizes response to the patient's troubled behaviors and sedate his/her psychiatric symptoms, the doctor cannot proceed with cancer treatment. Under such circumstances, although the doctor had recognized the need to explain the cancer disease condition to the patient him/herself, it is considered that the situation did not permit it. As a result, an explanation about cancer disease condition was given more often to the patient's family members than to the patients themselves.

**Cancer treatment:** About 50% of both male and female schizophrenic patients were receiving cancer treatment, which are less than normal cases of cancer treatment. Cost of cancer treatment is considered to be one of the reasons for this. According to the survey, 45% of male patients and 57% of female patients did not have any income. Since cancer treatment takes more medical expenses compared with other diseases, many patients apply for the high-cost medical care benefit system<sup>5</sup>. Using the system, if the patient subscribes to a cancer insurance, part of the medical expenses can be covered by cancer diagnosis benefit, but the use of cancer insurance requires receipt of an explanation on cancer disease condition from the doctor and the patient's consent to cancer treatment [7]. Based on the results of the survey, because only about 50% of schizophrenic patients received an explanation on cancer disease condition, it is considered that only small number of the patients used cancer insurance for treatment

## Conclusion

The current survey suggested that more than 70% of schizophrenic patients who were diagnosed with cancer at a specialized mental hospital died within 1-2 years after diagnosis, and that in reality schizophrenic patients with cancer received only symptomatic treatment and died from cancer without receiving much explanation on his/her cancer disease condition. In Japan, which has the world's leading-edge cancer treatment technology, it is important for psychiatric nurses to conduct palliative care, which improves the patients' quality of life, with schizophrenic patients hospitalized at specialized mental hospitals.

## Limit of the Current Study and Future Issues

In the current study, a basic survey was conducted to elucidate the reality of schizophrenic patients who were diagnosed with cancer at 8 specialized mental hospitals in Prefecture A. Since the system for gathering information and the method of handling patients differ from one psychiatric healthcare institution to another in the prefecture, it is extremely difficult to grasp the reality accurately. Further, since the survey was conducted by distributing a survey form to 158 psychiatric nurses who took care of schizophrenic patients with cancer, and using the data from 90 nurses as subjects of study, the results of the current study are not necessarily common to all cases.

## Author Disclosure Statement

No authors have any conflicts interest or disclosures to report.

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