

Original Article

The Intervention Effectiveness of Home Medical Care Provided for Schizophrenic Patients by an Internal Medicine Clinic – A Challenge for Comprehensive Care Including Treatment for Physical Disorders –

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Abstract

In this study, the research target—10 schizophrenic patients who received home-visit care by a Greater Tokyo-based internal medicine clinic—were classified in two patient groups : a no-current-treatment group, such as “never received treatment” or “treatment stopped,” and an ongoing treatment group. An analysis of these groups was made by considering the actual process of introduction to home-visit care, present state of psychiatric treatment, physical complications, details of treatment intervention, and the outcome of the illness.

The cases receiving home visits accompanied by support, and the changes observed in cases and family members, were evaluated at the time of the initial visit and at 3, 6, and 12 months. Ratings on relevant scales showed that both patient groups had a tendency toward maintenance or improvement of both the patient’s mental and physical functioning and the family-care capacity. In particular, the patient’s mental functioning and the family-care capacity were significantly improved at the sixth month after the initial home visit in patients in the no-current treatment group, when compared to the ongoing treatment group. Schizophrenic patients with physical complications often develop into more difficult cases; however, it was suggested that home care for both the mental and physical conditions could contribute to a cure, with the participation of psychiatrists acting as team members of home medical care institutions for internal medicine, enabling the above integrated approach to both aspects.

(key words : home medical care, integrated mental and physical approach, outreach, physical complication, schizophrenia)

Introduction

In Japan, in 1995 the Mental Health Law was amended to become the Mental Health and Welfare Law, and a key feature driving this change was a growing awareness of schizophrenia as the “coexistence of illness and disability.”¹⁾ Namely, schizophrenia would be treated not just as a subject for medical treatment, but also as a subject for rehabilitation and welfare (livelihood support), and the amendment of the law provided a theoretical basis to review the condition. If this concept is followed, it is preferable that activity offering

an integrated medical and welfare service at home forms the core of the care for this mental disorder^{2) 3)}. However, in Japan, although Assertive Community Treatment (ACT) started as Health and Labor Sciences Research in 2002, and from the following year, clinical activities began, even now, such an approach to services is only implemented by some enthusiastic psychiatric medical institutions and mental health welfare centers⁴⁾. Moreover, schizophrenic patients are not exempt from the problems of aging; with age physical complications just keep on increasing⁵⁾, but the medical

institutions that can take charge of their treatment are extremely scarce. We can say with some certainty that home care of patients including those with physical disorders of the aged and mentally-disabled will be a serious issue for medical services in Japan.

In contrast to the impending size of the problem, very few surveys or research has been undertaken; only an extremely small number of medical institutions carry out effective practice in clinical situations, and such experience and knowledge is just shared among concerned local parties. Scientific data with more universality has not been collated yet.

Kitada, the first listed author, is a psychiatrist involved in mainly home-visit medical care from an internal medicine clinic located in a dormitory suburb of the Greater Tokyo Area. In this clinic, several doctors with different specialties look after a single patient. The clinic does not advertise psychiatric treatment, but employs some doctors with psychiatric treatment experience, including the first author, and offers home medical care for both mental and physical conditions. It appears there are very few home medical care institutions with such a protocol, and the possibility to present an effective model dealing with the above issues could be considered to exist.

Methods

Subjects

An internal medicine clinic in the Great Tokyo Area (hereinafter referred to as the C clinic) is designated as a support clinic of home health care, and having no hospitalization facility focuses mainly on home-visit care and home-visit nursing care, in which each patient is treated not only by their usual doctor, but also by several doctors with different specialties. In cooperation with nurses, the doctors are able to offer 24-hour and 365-day care; to date about 60% of patients receiving home-visit care had been attended by doctors until they died at home.

The usual procedure to initiate home-visit care is for the patient or a family member acting on their behalf to come to the clinic for an interview. They are asked to bring the medical treatment records from their previous doctor giving their medical history and the current condition requiring home visits. While checking the treatment information and the intention of the patient concerning home medical care, the clinic first obtains mutual agreement for home-visit care, and then makes home visits. The clinic also obtains the patient's consent to collecting data for research.

The C clinic describes itself as specializing in internal medicine and having no psychiatric department; however, since its establishment, they have maintained a policy that they never refuse to make a home visit for reason of the patient's social background or any disorder, and they have a number of cases with a mental disorder as the main diagnosis.

Conversely, whilst diagnosing and treating primary physical diseases, upon occasion, mental problems are observed, and in some cases diagnosis is reviewed and the primary condition becomes the psychiatric one. From among the 11 doctors employed by the clinic, 2 doctors including the first author, are psychiatrists and specialists certified by the Japanese Society of Psychiatry and Neurology, and deal with such cases.

From among the 1,538 C clinic patients (650 male; 888 female) who received home-visit care from its establishment in June 1999 to the end of December 2011, 10 patients diagnosed with schizophrenia and other psychotic disorders (295 codes in DSM-IV-TR⁶⁾) were selected as subjects of the study (0.65% of prevalence rate), (6 female, 4 male; age range 29 to 90 years with a median of 68.5).

The 10 subjects were selected from among 12 patients suspected of having schizophrenia and other psychotic disorders; two psychiatrists using the DSM-IV-TR diagnosed the patients retrospectively based on their medical records. Consequently, 2 cases that were not assessed as schizophrenia were excluded.

Investigation

Based on the state of psychiatric treatment at the initial home-visit care, the cases were classified into two groups: "patients never treated by a psychiatric institution or whose psychiatric treatment was stopped" (hereinafter, no-current treatment group) ; and "patients whose psychiatric treatment was ongoing" (hereinafter, ongoing treatment group). From the patient medical records, the following pieces of information were collected. As the social background: educational background, work experience, marital status, the number of family members living with the patient, family relationship of the main carer, family psychiatric history. Multi-axial evaluation using the DSM-IV-TR at the initial home visit. Intervention details after the initial home visit, details of treatment, whether home-visit nursing care was introduced or not, activities of social workers, the outcome, and period of home-visit.

In addition, patients who received home visits for more than 12 months were selected. Concerning the cases that received home visits accompanied by support, and the changes observed in patients and family members, we assessed the condition at the initial home visit, and at 3, 6, and 12 months. The following assessment scales were used and SPSS was used as statistical software.

Summary of assessment scales

- The Global Assessment of Functioning (DSM-IV-TR, GAF)

Assessment scales for mental, social and vocational functioning, excluding physical functioning. The rating scores are 1 to 100, and higher scores are assessed as higher functioning.

- Barthel Index (BI)⁷⁾

Assessment scales for the activity of daily living. The rating scores are 0 to 100, and higher scores are assessed as higher functioning. As a guideline, when the aggregate score is 40 or lower, it can be presumed that the patient needs assistance for almost every life activity.

· Home care score (HCS)⁸⁾

Assessment scales for the family-care capacity. The rating scores are 0 to 21, and higher scores are assessed as higher functioning. The subscale includes the following: the level of health & fitness of the carer, and their eagerness to care, financial situation, and their living environment. As the degree of difficulty to care increases due to the patient developing psychoneurosis or the like, the score drops. As a guideline, at a score of 7 to 10, it is necessary to appropriately use insurance for home care, and at a score of 6 or lower, there is a possibility of an “marginal family,” which needs to make

the maximum use of insurance for home care and other social insurance systems, and any nursing care provided by the local community, such as informal social support.

Results

Physical disorders at the initial home visit and the process of introduction

At the initial home visit, two patients had never been treated by a psychiatric institution, and psychiatric treatment of three patients was stopped. They were classified into a “no-current-treatment” group. Five patients whose psychiatric treatment was ongoing were classified into an “ongoing treatment” group. Regarding these 10 patients, introduction of home visit treatment, and the existence of patient psychiatric treatment records was summarized into Table 1.

Table1 Profile of patients

Case	Age	Gender	State of psychiatric treatment at the initial home visit *1	Duration without treatment	Introduction of home visit treatment	Psychiatric treatment records	Mention to a need for psychiatric treatment
A1	29	M	Never	9 years	Introduced by another home-visit medical institution due to psychiatric disorder	None	Exist
A2	83	M	Stopped	5 years	Discharged from a hospital due to physical disorders	None	None
A3	68	F	Stopped	4 months	Discharged from a hospital due to physical disorders	None	None
A4	90	F	Never	50 years	Discharged from a hospital due to physical disorders	None	None
A5	73	F	Stopped	2 months	Discharged from a hospital due to physical disorders	None	None
B1	50	F	Ongoing	—	Home-visit to patient's family	None	Exist
B2	69	F	Ongoing	—	Discharged from a hospital due to psychiatric disorders	Exist (without destination address)	Exist
B3	72	M	Ongoing	—	Discharged from a hospital due to psychiatric disorders	Exist (without destination address)	Exist
B4	50	M	Ongoing	—	Discharged from a hospital due to psychiatric disorders	None	Exist
B5	56	F	Ongoing	—	Home-visit to patient's family	None	Exist

*1 Never (never received treatment)
Stopped (stopped treatment)
Ongoing (ongoing treatment)

Regarding the two patients who had not received psychiatric treatment, one was introduced by another home-visit medical institution, and the other by the hospital doctor in charge of physical disorders when the patient was discharged. In both cases, the existence of psychiatric symptoms was clearly recorded in patient medical treatment records, and in particular, the patient's hospital doctor told the family members not to take the patient to the hospital, even if physical symptoms worsened. The periods of no treatment since the estimated onset age were nine years and 50 years, respectively.

Psychiatric treatment was stopped for three patients. All

three cases were introduced by the hospital doctor in charge of physical disorders when they were discharged, and in their records, schizophrenia was mentioned as a previous illness, and the existence of psychiatric symptoms and a need for psychiatric treatment were not mentioned. The suspension periods were two months, four months, and five years, respectively. The reasons for suspension were as follows: two patients were hospitalized for a physical disorder during the course of proxy consultation by their family members; and one patient needed priority treatment for the exacerbation of a physical complication.

In treatment of the ongoing group, two patients had been

hospitalized in a psychiatric hospital for a total of more than 40 years each, and when they were discharged, home-visit care was proposed. In both cases, the medical treatment records were presented; however, no specific institution was named to receive the records, and no arrangement had been made by the hospital to continue psychiatric treatment.

In one case, home-visit care started because of the exacerbation of physical complications during the course of proxy consultation by a family member – caused by the patient's social withdrawal – and the family member requested psychiatric treatment for the patient as well. The C clinic received a phone call from the treating doctor to arrange hand over, but the doctor refused to release the patient's treatment records.

Two hospital patients continued psychiatric treatment as outpatients, and the A clinic took charge of their physical disorder treatment by home visits and gave supports with home health aides.

Social backgrounds of the patients (Table 2)

Focusing on the patients' educational background, one patient experienced five years of education; three patients had nine years; one had twelve; two had eighteen; and three patients' education was unidentified. Further details are as follows:

- Number of years of work experience

None: 1 patient. Less than 5 yrs: 2 patients. 5 to less than 10 yrs: 4 patients. 10 to less than 15 yrs: 1 patient. More than 30 yrs: 1 patient. Not known: 1 patient.

- Marital status

Married: 6. Not married: 4.

- The number of people who are living with the patient

1 person: 7. 2 persons: 2. Apartment house with nursing care: 1.

- Main carer

Spouse: 3. Child: 2. Brother/sister and their spouse: 2. Grandparent: 1. Professional carer: 1. No need of care: 1.

We were unable to establish all the family psychiatric histories clearly; however, two carers admitted delusional speech and behavior. As mental disorders, the following symptoms can be presumed as the new onset caused by the burden of caring: one case of depression and one alcoholic. One married couple were both schizophrenic.

Multi-axial evaluation using the DSM- IV -TR at the initial home visit (Table 3)

According to Axis I, Clinical Disorders, the following diagnoses were made and after home visits, were all confirmed as accurate:

Residual type: 7. Paranoid type: 1. Catatonic type: 1. Undifferentiated type: 1.

Regarding Axis II, Personality Disorders and Mental Retardation, 1 patient was suspected of a borderline intellectual functioning; the others were not suspected.

In relation to axis III, General Medical Conditions, focusing on the direct cause of the introduction of home-visit care, the following results were obtained: Diabetes: 4 (including diabetic gangrene and diabetic nephropathy); disuse syndrome: 3 (including tube feeding due to gastrostomy);

Table 2 Social backgrounds of the patients

Case	Education (Year)	Work experience (Year)	Marital status	The number of people who are living with the patient	Main carer	Family psychiatric histories
A1	9	< 5	Not married	2	Grandparents	Grandparent (delusional speech and behavior)
A2	Unidentified	30	Married	1	Spouse	None
A3	9	< 10	Married	1	Spouse	None
A4	5	< 10	Married	1	Child	Son (alcoholic)
A5	Unidentified	Unidentified	Married	1	Child	None
B1	9	< 5	Not married	1	Sibling	Brother (delusional speech and behavior)
B2	Unidentified	< 10	Not married	0 *1	Professional carer	None
B3	12	< 15	Not married	2	Sibling's spouse	Younger brother (depression)
B4	18	0	Married	1	Spouse	Spouse (schizophrenia)
B5	18	< 10	Married	1	No need of care	Spouse (schizophrenia)

*1 apartment house with nursing care

Table 3 Multi-axial evaluation using the DSM-IV-TR at the initial home visit

Case	Axis I Clinical Disorders	Axis II Personality Disorders and Mental Retardation	Axis III General Medical Conditions	Axis IV Psychosocial and Environmental Problems	Axis V GAF
A1	Undifferentiated 295.60	None	Diabetes	No family register Lost his parents in childhood	15
A2	Residual type 295.60	None	Diabetic gangrene	Elder-to-elder nursing	51
A3	Residual type 295.30	Borderline intellectual functioning	Drug-induced Parkinsonism	Living alone during the day time	21
A4	Paranoid type 295.30	None	Heart failure	Alcoholic carer	21
A5	Catatonic type 295.20	None	Anemia Disuse syndrome Aspiration pneumonia	Living alone during the day time	5
B1	Residual type 295.60	None	Disuse syndrome Hemorrhagic uterine myoma	Death of mother as the main carer	21
B2	Residual type 295.60	None	Diabetes ; Post femoral neck fracture	Absence of any family member carer	35
B3	Residual type 295.60	None	Disuse syndrome Tube feeding Stroke aftereffects	Disharmony with family member carer ; Main carer with depression	10
B4	Residual type 295.60	None	Stroke aftereffects Disuse syndrome Bronchial asthma	Main carer with schizophrenia	25
B5	Residual type 295.60	None	High-blood pressure	Spouse with schizophrenia	55

stroke aftereffects: 2; heart failure and high-blood pressure: 2; aspiration pneumonia: 2; drug-induced Parkinsonism: 1; bronchial asthma: 1; hemorrhagic uterine myoma: 1; and post-femoral neck fracture: 1. Most of these disorders are considered complications that often occur in schizophrenia⁹⁾, and an especially high complication ratio of diabetes was found. In addition, malignant tumors, which are found extremely often in home-visit care, were not included in the results.

Regarding Axis IV, Psychosocial and Environmental Problems, the following situations were recorded concerning the relationship between the patient and their carers (some patients fall into more than one category):

Death of the main carer: 1. Aging of the main carer: 2. Mental disorder of the main carer: 2. Living alone during the daytime: 1. Absence of any family member carer: 1. Disharmony with family member carer: 1.

For Axis V, GAF, the lowest score was 5, the highest 55, with a median of 21.

Intervention details after the initial home visit and the outcome (Table 4)

Details of the treatment were as follows: 6 patients continually received both physical and psychiatric treatments, including medication; 2 patients received regular outpatient psychiatric care from another doctor in a hospital, and were also given general physical treatment and family therapy and home

health care support; 1 patient was taken to a mental hospital and hospitalized on the very day of the first home visit; and 1 patient continued physical disorder treatment, and as their psychiatric treatment, received supportive psychotherapy and family counseling with no medication.

Home-visit nursing care was introduced for 8 patients; the C clinic visited 2 patients, and visiting nursing centers visited the 6 other patients. The reasons for the remaining 2 patients not receiving home-visit nursing care were: hospitalization to a mental institution on the day of the initial visit; and disagreement among family members.

With regard to social work, MSWs of the C clinic were involved in all the initial home visits, and later were continually involved in the following cases (some cases fall under more than one category):

- Assisted in authorization of disability: 3
- Participated in joint counseling before leaving hospital: 3
- Assisted in medical payment for services and supports for persons with disabilities: 1
- Assisted in application for welfare benefits: 1
- Assisted in obtaining a family register: 1
- Assisted in changing residence: 1

The outcomes are as follows:

- Patients still being treated: 2
- Patient home deaths due to exacerbated physical disorder, and attended by the clinic doctor: 2
- Patients hospitalized for physical medical treatment: 2 (1

Table 4 Intervention details after the initial home visit and the outcome

Case	Psychiatric treatment after the initial home visit	Outcome	Physical disorder treatments	Outcome	Home visit nursing care	Outcome	Social work after the initial home visit	Authorization of disability after the initial home visit	General Outcome	Duration of home visit
A1	Introduced medication ; Cooperated with a psychiatric hospital ; Supportive psychotherapy	Eased negative symptoms ; Expanded act	Insulin self-injection ; Measures of complication	Eased glyce-mic control	Newly intro-duced by C clinic	Accepted insulin self-injection ; Improved lifestyle	Assisted in obtaining a family register record; Assisted in procedures to authorize disability ; Joint counseling before leaving hospital ; As-sisted in chang-ing residence	Psychiatric disability class 2	Left psychi-atric hos-pitalization and physical hospitaliza-tion	7 years and 7 months
A2	Resumed medi-cation	Continued home care	Skincare for gangrenous part of legs due to diabe-tes	Grew gangre-nous part ; Exacerba-tion of renal failiure	Introduced other home visit nursing care station	Sustained ADL ; Sup-ported the family	None	None	Deathwatch at home	2 years and 7 months
A3	Medication (re-duced)	Disappeared Parkin-sonism ; Expansion of ADL	Reha-bilitation for disuse syndrome	It became possible for patient to go out	Newly intro-duced other home visit nursing care station	Possible to go out ; Continued to live at home	Assisted in medi-cal payment for services and sup-ports for persons with disabilities ; Assisted in appli-cation for welfare benefits	None	Passed away after hos-pitalization and to receive internal medical care	3 years and 11 months
A4	Carer did not agree to using pshchotropics without notifica-tion of the pa-tient ; Supportive psychotherapy ; Supported car-er	Continued home care	Medicated cardiovas-cular agent without noti-fication	Symptom palliation of heart failure	None (Dis-agreement by family members)	—	None	None	Deathwatch at home	3 years and 1 month
A5	Emergency hospitalization in a psychiatric hospital		None		None	—	None	None	Hospitaliza-tion in a psychiatric hospital	0
B1	Medication (increased) ; Supportive psy-chotherapy	Eased negative symptoms ; Expaned act	Cooperated with gynec-ology and dermatology	Operation of myoma	Newly intro-duced by C clinic	Improved lifestyle ; ADL recov-ered	Assisted in procedures to au-thorize disability ; Joint counseling before leaving hospital	Physical dis-ability class 2	Continued	11 months
B2	Medication (re-duced) ; Support-ive psychother-apy ; Improved home condition	Huge reduction in medication ; Continued home care	Controlled chronic illness	Stopped medication for diabetes	Newly intro-duced other home visit nursing care station	ADL sustained	None	None	Changed treatment	4 years and 5 months
B3	Medication ; Supported family	Continued home care	Controlled tube feeding	Continued home care	Newly intro-duced other home visit nursing care station	Resumed ingestion ; ADL expan-sion	Assisted in procedures to au-thorize disability	Physical dis-ability class 1	Continued	1 year and 5 months
B4	Other clinic	Unstable	Controlled several ill-nesses	Unstable	Newly intro-duced other home visit nursing care station	Improved lifestyle ; Continued home care	Joint counseling before leaving hospital	None	After hos-pitalization to receive internal medical care, transferred to psychiatric hospital	1 year and 1 month
B5	Other clinic	Partially stable ; Difficult to care for the spouse	Medication ; Guidance of lifestyle	Continued home care	Newly intro-duced other home visit nursing care station	Improved lifestyle ; Sustained to live at home	None	None	Received medical treatment for psychiatric disorder at other clinic ; Received medical treatment for physical disorder at C clinic	4 months

died)

- Patient receiving outpatient care from another hospital for both physical and psychiatric treatments: 1
- C clinic outpatient receiving internal medical care, and outpatient care from another hospital for psychiatric treatment: 1
- Patient changed their doctor for reason of communal housing situation: 1
- Patient entered a psychiatric hospital: 1

The home-visit period was one day for the shortest, 9 years and 2 months for the longest, with a median of 2 years and 10 months.

Assessment of intervention effect rated on the GAF, BI, and HCS scales

Table 5 shows three scale changes regarding the introduction of home-visit care: 3-month, 6-month, and 12-month.

Table 5 Assessment of intervention effect rated on the GAF, BI, and HCS scales

	At the initial intervention			At the 3-month intervention			At the 6-month intervention			At the 1 year intervention		
	GAF	BI	HCS	GAF	BI	HCS	GAF	BI	HCS	GAF	BI	HCS
A1	15	60	8	20	65	8	25	85	9	25	90	9
A2	51	55	6	60	55	9	63	55	9	63	55	9
A3	21	40	7	31	55	9	35	75	11	40	80	12
A4	21	75	8	21	75	8	25	75	8	25	75	8
A5	5	0	7	hospitalized	hospitalized	hospitalized						
B1	21	75	11	21	75	11	21	75	11	30	90	12
B2	35	95	15	35	95	15	35	95	15	35	95	15
B3	10	10	5	12	10	5	12	20	5	12	20	5
B4	25	100	7	28	100	7	28	100	7	28	100	7
B5	55	100	14	55	100	14	Outpatient					

In each of the no-current treatment group, and the ongoing treatment group, 4 patients continued receiving home visits for more than one year, and Figs. 1 to 6 show changes to their GAF, BI, and HCS scores, starting from the initial home visit. For both groups, a tendency of maintenance or improvement was observed in all assessment scales. Mann-Whitney's U test was conducted, and concerning the two scales, GAF ($p=0.018$) and HCS ($p=0.047$), the no-current treatment group showed a statistically significant improvement, compared to the ongoing treatment group, at the sixth month from the initial home visit.

Figures 1-6 depict chronological changes in GAF, BI, and HCS, reflecting the data in Table 5. Home visit care intervention is the starting point for these figures.

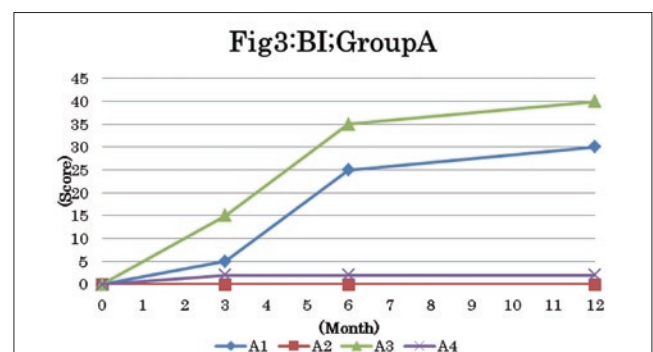
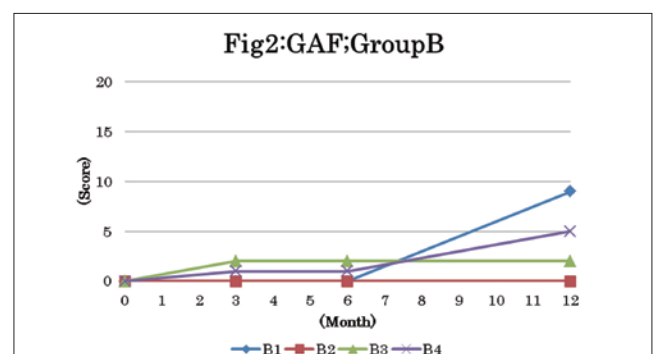
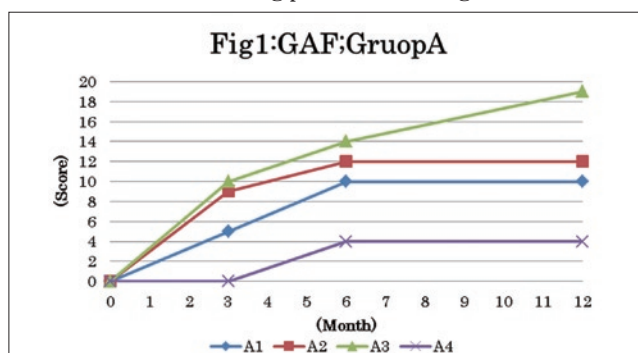
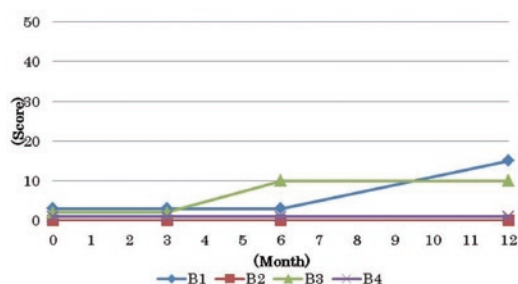
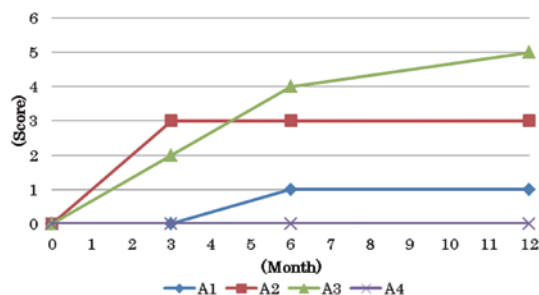
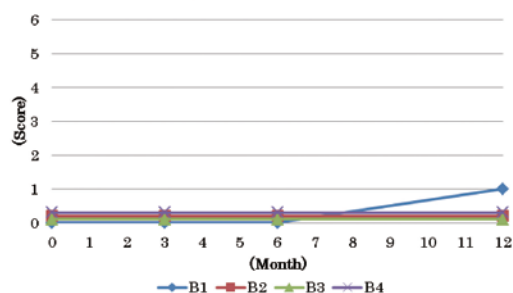


Fig4:BI;GroupB**Fig5:HCS;GroupA****Fig6:HCS;GroupB**

Cases

This section presents one case from each of the no-current treatment group, and the ongoing treatment group, and demonstrates the specific effects of intervention. Personal details have been modified.

Case A1: Non-treatment was shifted to an outpatient basis for both psychiatric and internal medical treatments, and home visits were completed

The patient was a 29-year-old male, who having lost his parents in childhood, was raised by his grandparents, but not included in the family register. After completing the junior high school course, he worked in the construction industry, but at the age of 18, he tried to obtain a driver's license and was greatly shocked to find he was not recorded in the family register. Not being able to obtain a driver's license, he was trapped in his job, and around the age of 20, he started withdrawing from society, and staying at home. The grandparents were welfare recipients, and they concealed

his existence from the welfare office. In July of the year X-1, he started complaining of physical pain and the grandparents talked about him with the welfare office, which then opened a case file. At first, a local doctor made a home visit resulting in a tentative diagnosis of mental disorder as well as serious diabetes, and in May of the year X, he was introduced to the C clinic.

At the initial home visit, there was very limited conversation with the patient, and a diagnosis of substupor symptoms due to extreme tension was made. Positive agreement for regular home visits was not confirmed, but as the grandparents were unwilling to sanction his admission into a psychiatric hospital, home visits were continued, especially as the patient did not refuse to take an antipsychotic agent. The medication gradually eased his tension and a minimal level of conversation became possible, but this consisted of mainly complaints found in "hypochondriaco-cenestopathic symptoms"¹⁰⁾ such as "I can't walk because I can't see" or "My nose is blocked."

With regard to his diabetes, dietary counseling was given to the grandmother, but his GHbA_{1c} value worsened, giving rise to Type I Diabetes, and insulin injections needed to be introduced; however, the patient and the grandparents both still refused to sanction his hospitalization for internal treatment. Accordingly, in February of the year X+2, frequent physician home visits were made, and insulin injections by a visiting nurse were given every day for 4 weeks. Although the patient complained he could not see, he confirmed the graduations of an insulin injector with his grandfather, and became adept at self-injection.

These occasions provided opportunities for the patient to establish better rapport and a dramatic improvement in the patient's world view occurred and he started talking about his hopes for the future. Then, diagnosis for both mental and physical aspects were confirmed, and the patient and the grandparents were persuaded to allow him to enter hospital in order to establish the foundations of social participation. In September of the year X+3, he was admitted to the psychiatric ward of a general hospital for 3 months, and with regard to the C clinic diagnosis of him having a "suspected mental disorder," the hospital doctor in charge of his case officially told him that he had "schizophrenia." The departments of ophthalmology and otorhinolaryngology did not find any abnormalities to match the patient's degree of complaining. After he left the hospital, accompanied by his grandfather he was a regular outpatient of the psychiatric department; however, physician home visits to treat his physical disorder and home-visit nursing care continued. After his acquisition of a family register, he and his family moved house, and some time later he was present at his grandmother's home deathbed; she was attended by the C clinic. In the year X+8, physical disorder treatment also shifted to hospital outpatient care, and home-visit nursing care

as well was taken over under ACT provided by the hospital responsible for his outpatient care.

Case B4: A 50-year-old male for whom only physical disorder treatment was shifted to home-visit care; due to multiple physical complications, it was considered that the effect of outpatient care on the patient would worsen his psychiatric symptoms

At the age of 22, he was diagnosed with schizophrenia, and became an outpatient receiving regular treatment, or was hospitalized for periods in the psychiatric ward of a general hospital. At the age of 40, he married a woman (Case B5) who he had met in the hospital waiting room. In October of the year Y-1, due to brain infarction he was hospitalized in the department of brain surgery of the same hospital, and began to suffer the aftereffects, which were left hemiparesis and higher cerebral dysfunction; his regressive behavior escalated, and he started a pattern of repeated short-stay hospitalization. In addition to the aftereffects of the brain infarction, he was suffering from diabetes, bronchial asthma and many other physical complications. He had visited the hospital for treatment in six physical departments, and that resulted in the worsening of his psychiatric symptoms. In May of the Y year, during a 2-month stay as an inpatient on a psychiatric ward, his usual psychiatrist offered instruction joint at his discharge. This resulted in the C clinic taking over medical care from the physicians, and concurrently with his leaving the hospital, the A clinic started home-visit care.

In cooperation with a visiting nursing center, the clinic offered home health aides including a diabetic diet. In addition, the patient was taking an oral corticosteroid for his bronchial asthma, and this was affecting his blood sugar levels; the clinic amended prescriptions and dosages. The husband and wife had always been anxious about life generally and their mental and physical health; however, the psychiatric department, the C clinic, and the visiting nursing center were able to cooperate on all aspects of the case, and for a while the patient was able to maintain life at home.

However, in March of the year Y+1, the patient secretly ate a large and unsuitable meal for his diabetic condition and lapsed into a diabetic coma. Since the patient's original hospital was unable to accept his admission, he was urgently admitted to a psychiatric hospital with an internal medicine department located far from his home. In response to a strict dietary regime in the hospital, his weight decreased and his diabetes temporarily stabilized and he left the hospital, but within several months, he was unable to control overeating, which had a detrimental effect on his wife's psychiatric symptoms. In August of the year Y+1, when he was hospitalized in an acute care hospital due to bronchitis, his wife no longer wanted to live with him. At last, he was transferred to another psychiatric institution. In addition, his wife had developed high-blood pressure triggered by the burden of nursing care, and in April of the year Y+1, she started receiving home-visit

care concurrently with her husband; however, along with the secession of the husband's home-visit care, her treatment was shifted to outpatient care at the C clinic.

Discussion

Features of our interventions and assessments

This paper covers 10 schizophrenia cases treated by home-visit care; the number of cases is admittedly few, and the prevalence rate to the total of home-visit care patients was 0.65%, which falls below the prevalence rate of schizophrenia in the general population. However, most of the cases had physical complications that resulted in it being too difficult to receive outpatient care, and treatment was needed for both mental and physical conditions, all of which are significant characteristics. Our research has found very few reports on home-visit care for schizophrenic patients with physical complications¹¹⁾, and especially in Japan, we were unable to find any research for several cases with physical complications, or reports on treatment practice.

As mentioned before, since its establishment, the C clinic has maintained a policy that they never refuse to make a home visit for reason of the patient's social background or any disorder. Consequently, as a matter of course, so-called difficult cases tend to be concentrated on the C clinic, and schizophrenic patients along with physical complications can be considered the typical example.

The result of the intervention assessment clearly showed that even in such difficult cases, both mental and physical functioning, and the family-care capacity tended to be maintained or improved when observed one year after intervention. Tanaka et al.¹²⁾ conducted a crisis intervention survey for schizophrenic patients who have never received treatment, or stopped treatment under ACT, and reported that improvements of mental functioning including GAF was statistically significant particularly at the sixth month of intervention, and in this paper, the no current-treatment group also showed improvements in mental functioning at the sixth month after the initial home visit even in cases with physical complications.

Characteristics of the group of patients who received no psychiatric treatment or stopped treatment

The key feature of the 2 untreated cases (A1, A4) is exacerbated physical disorders, and in both cases the previous doctors stopped treatment because of psychiatric symptoms, and introduced them to the C clinic. For patients who have never received psychiatric treatment, in principle, a hospital stay and treatment in a psychiatric ward should be taken into consideration; however, for both these cases, agreement from their family members was not obtained. The predominant symptoms of Case A1 were lack of spontaneity, and hypochondriacal-cenestopathic symptoms; they were core symptoms of the unfavorable outcome group reported in the

long-term outcome research on schizophrenic patients by Kobayashi¹³⁾. However, upon the occasion of success of an insulin self-injection regime at home, his mental functioning greatly improved, and after 8 years of home-visit care, his treatment shifted to outpatient care for both psychiatric and physical disorder treatments, and was handed over to the local ACT. Case A4, an elderly patient, often refused even physical disorder treatment, and had a symbiotic relationship with the main carer who was alcoholic, which prevented obtaining an agreement on psychiatric treatment from the family member. For this reason, psychiatric medication was not applied and efforts concentrated on mental support of the main carer; as a result, about 3 years later the patient died peacefully from their exacerbated physical disorder, and was attended by an C clinic doctor at their deathbed.

For all the 3 patients whose psychiatric treatment stopped, the suspension started at the onset of physical complications; the lack of the patient's insight into disease, which is usually the main cause of treatment suspension for schizophrenic patients, was not related.

This realistically demonstrates that it is often difficult for patients with schizophrenia to receive medical care covering both mental and physical conditions. The suspension of psychiatric treatment due to hospitalization for a physical disorder is an alarming problem; however, the main cause of hospitalization for the 2 cases was pneumonia determined during a proxy consultation by family members. There is also an undeniable possibility, although this is pure speculation, that the previous psychiatrists had missed seeing dysphagia caused by drug-induced Parkinsonism. In Case A5, the recurrence of psychiatric symptoms caused by suspended psychiatric treatment was severe, and the patient was taken to a psychiatric hospital on the very day of the initial home visit. In Case A2 and A3, resumption of psychiatric treatment accompanying the home-visit care introduction contributed to the improvement of the psychoneurosis, allowing the patients to control their physical chronic diseases, and family functioning to be improved, thus enabling the patients to maintain life at home.

Characteristics of the ongoing psychiatric treatment group

For reasons of convenience, we coined the term "ongoing treatment group"; however, in both cases where patients had been hospitalized in a psychiatric institution for a total of more than 40 years (B2 and B3), no specific institution was named to receive the medical treatment records. Finally after their family members consulted with several institutions, the patients started receiving home-visit care from the C clinic. For both patients, after their parents had died, a brother or sister living faraway stood as guarantor for them; it can be surmised how difficult it is to deal with the issue of shift towards community for inpatients, who are receiving long-term psychiatric hospital care. For Case B1, a patient with

a long-term withdrawal from society, and subject to proxy consultation, home-visit care was introduced after seeing the home-care offered by the clinic at a family member's home death, and hand over from the previous doctor was not made in real terms. In such circumstances, all cases could be classified as belonging to the no current-treatment group. All these patients are now living their life at home in a mentally and physically stable condition.

For Case B4 and B5, outpatient psychiatric treatment was continued by the doctors who introduced them, and the characteristic of these cases are very different from that of other cases. In terms of home-visit care for physical disorders, the ADL score of the patients is not low enough to prevent them from hospital attendance, which does not suit the standard of home-visit care application. However, in a case of multiple physical disorders, particularly if the success or failure of controlling a lifestyle-related disease greatly affects the psychiatric symptoms, the importance of home-visit care for physical disorders in their daily living situation arises. Even if medical care providers are not directly responsible for psychiatric treatment, the advantage that those who have a good knowledge of the cognition and behavior characteristics of schizophrenic patients are predominantly involved in their lifestyle-related disease is not insignificant. In Case B4, the main carer herself was also a schizophrenic patient; with such a high degree of difficulty, the introducing hospital did not have a system to immediately respond to the exacerbation of the patient's mental and physical condition, resulting in the outcome of secession of home-visit care; but even so, the patient was able to maintain life at home for nearly one year.

Importance of home-visit care for both mental and physical conditions

As described so far, the problem of the schizophrenic patient's physical complications is a major factor of making the case more difficult or creating so-called "medical care refugees"; however, as shown in Case A1, some cases show great progress in psychiatric treatment while providing physical disorder treatment. Providing appropriate care for both mental and physical conditions tends to create a synergetic care effect. Moreover, since many of the physical complications have the nature of a lifestyle-related disease, mental and physical care conducted in the patient's home environment, could be a way to deal with the problem.

In Japan, it is expected that the home-care management of physical complications of patients with mental disorders is practiced mainly by visiting nursing centers^{14) 15)}, and such a trend is also found more in other countries that have a broader range of nursing duties^{16) 17)}. In addition, visiting nurses are expected to fulfill an extensive range of roles, such as care for patient family members and acting as a key person in the multidisciplinary team¹⁸⁾. The C clinic as well advises patients receiving home medical care to use home nursing jointly

as much as possible, and the effect has been shown in the presentation of the cases, and it is beyond discussion that the foundation established through mental and physical home-visit care by doctors will be more effective for home-visit nursing care.

Furthermore, one of the factors that affect patient's continuing to live at home is the family-care capacity, and especially important is the maintenance of the health of any family members and their eagerness to administer nursing care. As family member's mental disorders that appeared after the start of nursing care, this paper presented one case of depression and one case of alcoholism; for both cases treatment intervention was arranged. For intervention concerning physical disorders of family members, we dealt with many cases including one case of home attendance at a deathbed. Thus, home medical care for schizophrenic patients often requires mental and physical care for their family members, and it could be considered that there is not insignificant meaning in the provision of home medical treatment by professionals who are well aware of the family's distress and suffering.

A future in comprehensive care

In Japan, in the mental medical care field, the current of medical and welfare integrated outreach service including ACT, and integrative community life support (Kubota)¹⁹⁾ is now growing; however, regarding the response to physical complications, the country's systems are still underdeveloped.

Moreover, psychiatry in general hospitals, which has played a leading role concerning physical complication treatment of patients with mental disorders, has unfortunately contrary to a rise in its importance, shown a tendency to reduce²⁰⁾.

Kitada, first authors of this paper, is working for the C clinic, as a doctor in charge of chronic diseases including dementia and the aftereffects of stroke, and has attended patients at their deathbed. Takeda, a coauthor, has been working as a psychiatric consultant in the C clinic, while operating a psychiatric clinic with no hospitalization facility in the community. He introduces aging outpatients, who have had difficulty regularly visiting his own clinic, to the C clinic, and when any family member carer of a patient receiving the C clinic's home-visit care experiences a mental problem, he immediately guides them to his clinic's outpatient care, thus conducting clinic-and-clinic cooperation without any break in treatment care. In their psychiatric career, both doctors have had much work experience in general hospital psychiatric departments, and conduct cooperation and collaboration with doctors for physical disorders on a daily basis. As given in this paper, the participation of psychiatrists as team members in an internal medicine home medical care institution offering 24-hour service enables the provision of appropriate medical services based on an integrated mental and physical approach. Such home-visit care can be considered a developed form

of ACT, and one of a newly developing style of general hospital psychiatry. The authors consider that providing a comprehensive medical care service with integrated medical and welfare aspects, and integrated mental and physical treatment will offer the further development of the home care of schizophrenic patients.

Disclosure of conflict of interest

There is no conflict of interest.

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内科診療所における統合失調症患者に対する訪問診療の介入効果 ー 身体治療を含めた包括的ケアの取りくみ ー

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要 約

首都圏にある在宅診療専門内科診療所で往診を行った統合失調症患者10例について、精神科治療の「未治療・中断群」と「継続群」に分け、往診導入経路、身体合併症、治療介入の内容、転帰などを分析した。また往診とそれに伴う支援を経た症例および家族の変化に関し、往診導入時、3ヵ月後、6ヵ月後、12ヵ月後の状態評価を行った。両群とも精神機能、身体機能、家族介護力の全ての評価尺度において維持または改善の傾向が認められた。特に精神機能と家族介護力の2つの尺度においては、往診導入から6ヵ月目に「未治療・中断群」は「継続群」に比べて有意に改善していた。身体合併症を持つ統合失調症患者はしばしば困難症例化するが、心身両面のケアを在宅で行うことが処方箋の一つとなりうると共に、内科系在宅医療機関において精神科医がチームの一員として加わることによって、この心身統合的アプローチが可能になることが示唆された。

(キーワード: 統合失調症, 身体合併症, 在宅医療, アウトリーチ, 心身統合的アプローチ)