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審査学位論文
(博士)

A survey of patients who received
psychiatric emergency outpatient services
for physical complaints

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Abstract

The purpose of this study was to clarify the association between physical complaints and psychiatric disorders, as well as the importance of understanding the physical diseases of patients who receive psychiatric emergency outpatient services for their physical complaints. In total, 4,883 patients who visited the Iwate Advanced Emergency and Critical Care Center or the clinics of Iwate Medical University for their physical complaints were investigated between 2004 and 2012. We conducted a detailed survey of complaints, backgrounds, and treatments after classifying complaints based on the major area of medical care and the frequency of visits. 70% were female, and a high percentage of

them were categorized as suffering from "Neurotic, stress-related and somatoform disorders"(F4). 80% of patients could return home, but several serious cases required hospitalization. Among neurologic symptoms, consciousness disorder was the most prevalent, with a higher rate of hospitalization. Among patients with respiratory symptoms, there were a higher percentage of younger females categorized as F4, and a high proportion of them received psychotropic drugs and psychotherapy. This survey showed that each physical complaint that required psychiatric emergency outpatient services was associated with various psychiatric diseases. A further investigation of the physical complaint in those patients is required.

*Key words : somatization, consultation liaison psychiatry,
psychiatric emergency medicine, primary complaint, psychosomatic*

I. Introduction

Among patients who consult primary care doctors for their physical symptoms, more

than half do not have a verifiable organic disease; instead, their physical symptoms have a psychiatric etiology¹⁻⁴⁾.

For symptoms without identifiable organic diseases despite proper medical examination, Wessely and colleagues proposed the use

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of the term Functional Somatic Syndrome (FSS) in 1995). This is a general term for medically unexplained symptoms (MUS) across all medical specialties⁶). One known characteristic of FSS is an elevated frequency of psychiatric complications, such as depression and anxiety⁷).

Better determining the extent to which psychiatric pathology contributes to the physical complaints in the medical emergency service might lead to more efficient treatment and disposition of these patients. As such, assessing the possible psychiatric components of physical symptoms may be a pertinent undertaking. To achieve this goal, one possible approach might be to more fully assess patients presenting to the medical emergency service with physical symptoms and physical complaints who are ultimately referred for a psychiatric assessment.

In our institution if, following triage by a nurse and a physician, a psychiatric etiology for a physical complaint is suspected then the patient is referred to an ER psychiatrist for a psychiatric assessment. In this study we investigated patients with FSS presenting to the Iwate Advanced Emergency Medical Service Center (Center) or the primary or secondary clinics of Iwate Medical University (Primary & Secondary) to clarify the following:

- 1) A more detailed description of the physical symptoms themselves
- 2) Whether there is a possible association between these symptoms and psychiatric disease,
- 3) Treatment outcome, either physical or psychiatric, and
- 4) Forthcoming challenges for emergency psychiatric/physical treatment of patients with physical complaints.

II. Materials and methods

A subpopulation of 4,883 patients presenting with FSS was selected from a pool of 13,990 patients who visited the Center or Primary & Secondary Emergency Clinics between April 1, 2004, and March 31, 2012 (Center: 3,077 patients, Primary & Secondary: 10,913 patients). From this population, 4,883 patients who had physical complaints were selected as subjects.

FSS were considered when no associated physical abnormality (or mild physical findings that did not appear to be the main cause of the presenting physical symptom) were found. However, there was no clear general medical definition. In this study, we defined patients with physical complaints as "patients who complained of having physical symptoms, and sought psychiatric consultation, or were assigned to psychiatric consultation".

Physical complaints were classified into 4 categories based on the International Classification of Diseases, 10th Revision (ICD-10)⁸), as follows: Code G: "neurologic symptoms" (consciousness disorder, heaviness in head/headache, dizziness, convulsion, weakness, numbness, staggering, shivering); Code K: "digestive symptoms" (nausea, vomiting, epigastric distress/stomach ache, anorexia, constipation/diarrhea); Code J: "respiratory symptoms" (hyperpnea, dyspnea); Code I: "cardiovascular symptoms" (angina pectoris/chest pain, palpitation). Complaints that could not be classified in the above were classified into the following 10 categories: "ophthalmology/otolaryngology/dermatology/urology symptoms", "fever", "fatigue", "physical pain", "injury", "common cold", "side effects of psychotropic drugs", "unidentifiable physical

disorder (unidentifiable physical complaints such as feeling gloomy, not feeling so good), "alcohol intoxication", and "other".

Demographic (gender, age), first or repeat visit, scheduled or unscheduled visit, and diagnosis were assessed. Treatment and outcomes of emergency outpatient visits were investigated as "treatment" after medical examination.

Psychiatric diagnoses were categorized as follows based on the ICD-10 "Mental and Behavioural Disorders": F0, "Organic, including symptomatic, mental disorders"; F1, "Mental and behavioural disorders due to psychoactive substance use"; F2, "Schizophrenia, schizotypal and delusional disorders"; F3, "Mood (affective) disorders"; F4, "Neurotic, stress-related and somatoform disorders"; F5, "Behavioural syndromes associated with physiological disturbances and physical factors"; F6, "Disorders of personality and behaviour in adults"; G40, "epilepsy"; and "other".

Treatment was assessed by one of the following: 1) psychotropic drugs (oral, intramuscular or by infusion) were administered or prescribed on discharge, 2) psychotherapy or 3) physical treatments were performed (blood collection, imaging or the administration of medication other than psychotropics).

At the Center, and Primary & Secondary Clinics all assessments were performed by board certified psychiatrists specialized in emergency psychiatric care.

The Primary & Secondary outpatient clinic deals with mild-to-moderate disease at night during holidays. The Center Clinic accepts a severe physical complications case such as dismemberment or the extensive burns

for 24 hours. ER psychiatrists who provided emergency service filled out a "Patient information form for emergency outpatient" (case card). All assessments and diagnoses for each investigational variable written on these case cards were conducted by 2 psychiatric doctors who were in charge of the emergency unit and the 11 psychiatric doctors on duty in our clinic under the supervision of a psychiatric doctor of a higher position (designated mental health care provider).

In the comparison of each investigation variable (e.g., gender, age, etc.), ratios were tested by the chi-square test. Multiple logistic regression analysis (forced entry method) was conducted using each physical complaint (neurologic symptoms, digestive symptoms, respiratory symptoms, cardiovascular symptoms, fatigue, physical pain, side effects of psychotropic drugs) claimed by more than 200 patients as a dependent variable, and demographic variables and treatments after the medical examination as explanatory variables. SPSS 21.0 J for Windows was used for statistical analysis. To protect the privacy of patients during data management and processing, personal identifiable information of patients was eliminated. This study was conducted after receiving the approval of the ethics committee of Iwate Medical University.

III. Results

FSS presentations from the code G group (neurologic symptoms) were the most prevalent (1796 of 4883 cases). Other common symptoms observed were 828 cases of digestive symptoms, 614 cases of respiratory symptoms, and 284 cases of cardiovascular symptoms.

Table 1-1. Overview of physical complaints

Major Symptom	Minor Symptom	Frequency (%)	
Neurotic	total	1796 (36.8)	1796 (100.0)
	Consciousness disorder		489 (27.2)
	Heaviness in head/Headache		431 (24.0)
	Dizziness		303 (16.9)
	Seizure		175 (9.7)
	Weakness		123 (6.8)
	Numbness		98 (5.5)
	Stagger		83 (4.6)
	Shivering		60 (3.3)
	Other		34 (1.9)
Digestive	total	828 (17.0)	828 (100.0)
	Nausea, vomiting		481 (58.1)
	Stomach discomfort, stomach ache		229 (27.7)
	Anorexia		56 (6.8)
	Constipation, diarrhea		43 (5.2)
	Other		19 (2.3)
Respiratory	total	614 (12.6)	614 (100.0)
	Hyperpnea		549 (89.4)
	Respiratory discomfort		63 (10.3)
	Other		2 (0.3)
Cardiovascular	total	284 (5.8)	284 (100.0)
	Angina pectoris, chest pain		141 (49.6)
	Palpitation		130 (45.8)
	Other		13 (4.6)
Side effect of psychotropic drug		293(6.0)	
Fatigue		270(5.5)	
Physial pain		206(4.2)	
Unidentifiable physical disorder		123 (2.5)	
Common cold		108 (2.2)	
Fever		73 (1.5)	
Injury		72 (1.5)	
Eye, ear, skin, urinary		62 (1.3)	
Drunkenness		36 (0.7)	
Other		118 (2.4)	
Total		4883 (100.0)	

Table 1-2 (supplement). Consciousness disorder only

Symptom	Frequency (%)
Stupor	206(42.1)
JCS I	63(12.9)
JCS II	30(6.1)
JCS III	62(12.7)
Alteration of consciousness	49(10.0)
Obnubilation	48(9.8)
CPA	13(2.7)
Epilepsy	11(2.2)
Other	7(1.4)
Total	489(100)

1. Demographic variables

Sex ratios for all physical complaints exhibited a higher percentage of females compared to males other than for alcohol intoxication, and a higher percentage of females had respiratory symptoms.

Average age was highest for those presenting with physical injury and lowest for those presenting with respiratory symptoms. When age groups were divided into 1) 10-30s, 2) 40-60s, and 3) 70-90s, the highest prevalence seen for each age group was for side effects of psychotropic drugs for tertile 1, and alcohol intoxication for tertile 2. As for the 3rd age group there is no FSS that is more prevalent than in the first 2 groups.

Among the primary complaints for new patients, respiratory symptoms were the most prevalent.

Among the primary complaints, injury, drunkenness, and respiratory symptoms were detected more frequently at Center compared to other primary complaints.

Regarding patients with regular clinic visits, patients with an unidentifiable physical disorder had a higher percentage of patients visiting our clinic, and patients with injury had a higher percentage of patients visiting other clinics.

Among categories of ICD-10 diagnosis, the ratio of F2 accounts for 70% of side effects of psychotropic drugs, the ratio of F4 accounts for 58% of respiratory symptoms, and the ratio of the F1 accounts for 44% with drunkenness.

2. Treatment after the medical examination

Physical interventions were performed for over 50% of patients presenting with injury, cold-like symptoms, fever and alcohol intoxication.

Psychotropic medication was prescribed to more than 50% of patients presenting with medication (psychotropic) side effects, respiratory symptoms, unidentifiable physical disorders, fatigue and cardiovascular symptoms.

As for outcome, 83% of patients were discharged following the medical or psychiatric evaluation.

However, more than 10% of patients with injury and fever were hospitalized in the emergency center. More than 10% of patients with alcohol intoxication, other, injury, neurologic symptoms, or fever were hospitalized in the psychiatric ward. In total 16.7% of patients with traumatic chief complaint were hospitalized in the emergency center ward, and 15.3% were hospitalized in a psychopathic ward. As for fever, 15.1% of patients were admitted to the emergency center ward, and 12.3% were hospitalized in a psychopathic ward.

3. Logistic regression analysis

1) Neurologic symptoms

The odds ratio for Primary & Secondary consultation was 0.469 times in comparison with the Center consultation ($p < 0.001$). As for the treatment after the consultation, psychotropic drug administration was 0.854 times ($p = 0.043$), the physical treatment was 1.188 times ($p = 0.035$). As for the outcome after the consultation, return was 0.569 times ($p = 0.001$).

2) Digestive symptoms

The odds ratio for Primary & Secondary consultation was 2.450 times in comparison with the Center consultation ($p < 0.001$), and for first visits was 0.669 times in comparison with repeat visits ($p = 0.003$). The odds rate for scheduled visits was 0.586 at our clinic

Table 2-1. Background factors (sex, age, age group, visit group, clinic group, regular visit of clinic)

Symptom	Sex (%)		Average age (\pm SD)	Age group (%)		
	Male	Female		10s - 30s	40s - 60s	70s - 90s
Neurotic	596 (33.2)	1200 (66.8)	43.29 (\pm 16.75)	820 (45.7)	811 (45.2)	165 (9.2)
Digestive	275 (33.2)	553 (66.8)	40.05 (\pm 16.02)	510 (61.6)	257 (31.0)	61 (7.4)
Respiratory	96 (15.6)	518 (84.4)	33.94 (\pm 13.99)	432 (70.4)	164 (26.7)	18 (2.9)
Cardiovascular	69 (24.3)	215 (75.7)	43.85 (\pm 16.31)	142 (50.0)	116 (40.8)	26 (9.2)
Side effect of psychotropic drug	70 (23.9)	223 (76.1)	34.23 (\pm 11.03)	220 (75.1)	70 (23.9)	3 (1.0)
Fatigue	74 (27.4)	196 (72.6)	43.46 (\pm 14.78)	109 (40.4)	140 (51.9)	21 (7.8)
Physical pain	55 (26.7)	151 (73.3)	40.84 (\pm 14.58)	110 (53.4)	88 (42.7)	8 (3.9)
Unidentifiable physical disorder	34 (27.6)	89 (72.4)	40.30 (\pm 15.20)	56 (45.5)	59 (48.0)	8 (6.5)
Common cold	39 (36.1)	69 (63.9)	38.27 (\pm 13.75)	62 (57.4)	43 (39.8)	3 (2.8)
Fever	29 (39.7)	44 (60.3)	42.74 (\pm 17.44)	38 (52.1)	27 (37.0)	8 (11.0)
Injury	33 (45.8)	39 (54.2)	45.86 (\pm 15.58)	27 (37.5)	39 (54.2)	6 (8.3)
Eye, ear, skin, urinary	22 (36.1)	40 (64.5)	40.89 (\pm 16.60)	32 (51.6)	27 (43.5)	3 (4.8)
Drunkenness	18 (50.0)	18 (50.0)	43.94 (\pm 15.62)	14 (38.9)	20 (55.6)	2 (5.6)
Other	42 (35.6)	76 (64.4)	41.44 (\pm 16.56)	59 (50.0)	54 (45.8)	5 (4.2)
Total	1452 (29.7)	3431 (70.3)	40.74 (\pm 16.03)	2631 (53.9)	1915 (39.2)	337 (6.9)

Table 2-2. Background factors (ICD-10 code at medical examination)

	F0	F1	F2	F3	F4	F5
Neurotic	186 (10.4)	106 (5.9)	355 (19.8)	292 (16.3)	597 (33.2)	11 (0.6)
Digestive	41 (5.0)	32 (3.9)	193 (23.3)	132 (15.9)	305 (36.8)	5 (0.6)
Respiratory	7 (1.1)	9 (1.5)	72 (11.7)	118 (19.2)	357 (58.1)	2 (0.3)
Cardiovascular	17 (6.0)	8 (2.8)	56 (19.7)	61 (21.5)	114 (40.1)	0 (0.0)
Side effect of psychotropic drug	5 (1.7)	1 (0.3)	206 (70.3)	49 (16.7)	24 (8.2)	0 (0.0)
Fatigue	9 (3.3)	7 (2.6)	61 (22.6)	77 (28.5)	84 (31.1)	0 (0.0)
Physical pain	5 (2.4)	9 (4.4)	40 (19.4)	29 (14.1)	89 (43.2)	1 (0.5)
Unidentifiable physical disorder	8 (6.5)	4 (3.3)	36 (29.3)	31 (25.2)	30 (24.4)	0 (0.0)
Common cold	8 (7.4)	1 (0.9)	36 (33.3)	13 (12.0)	25 (23.1)	0 (0.0)
Fever	10 (13.7)	2 (2.7)	20 (27.4)	10 (13.7)	18 (24.7)	0 (0.0)
Injury	4 (5.6)	6 (8.3)	21 (29.2)	18 (25.0)	8 (11.1)	1 (1.4)
Eye, ear, skin, urinary	4 (6.5)	4 (6.5)	11 (17.7)	15 (24.2)	22 (35.5)	1 (1.6)
Drunkenness	5 (13.9)	16 (44.4)	2 (5.6)	2 (5.6)	8 (22.2)	0 (0.0)
Other	10 (8.5)	4 (3.4)	41 (34.7)	22 (18.6)	28 (23.7)	1 (0.8)
Total	319 (6.5)	209 (4.3)	1150 (23.6)	869 (17.8)	1709 (35.0)	22 (0.5)

Table 3. Treatment after medical examination

	Administration of psychotropic drug (%)		Prescription of psychotropic drug (%)	
	Yes	No	Yes	No
Neurotic	747 (41.6)	1049 (58.4)	228 (12.7)	1568 (87.3)
Digestive	356 (43.0)	472 (57.0)	88 (10.6)	740 (89.4)
Respiratory	393 (64.0)	221 (36.0)	99 (16.1)	515 (83.9)
Cardiovascular	149 (52.5)	135 (47.5)	56 (19.7)	228 (80.3)
Side effect of psychotropic drug	245 (83.6)	48 (16.4)	68 (23.2)	225 (76.8)
Fatigue	168 (62.2)	102 (37.8)	28 (10.4)	242 (89.6)
Physical pain	83 (40.3)	123 (59.7)	38 (18.4)	168 (81.6)
Unidentifiable physical disorder	77 (62.6)	46 (37.4)	19 (15.4)	104 (84.6)
Common cold	21 (19.4)	87 (80.6)	12 (11.1)	96 (88.9)
Fever	11 (15.1)	62 (84.9)	5 (6.8)	68 (93.2)
Injury	5 (6.9)	67 (93.1)	2 (2.8)	70 (97.2)
Eye, ear, skin, urinary	22 (35.5)	40 (64.5)	9 (14.5)	53 (85.5)
Drunkenness	1 (2.8)	35 (97.2)	3 (8.3)	33 (91.7)
Other	48 (40.7)	70 (59.3)	23 (19.5)	95 (80.5)
Total	2326 (47.6)	2557 (52.4)	678 (13.9)	4205 (86.1)

Visit group (%)		Clinic group (%)		Regular clinic visit (%)			Total (%)
New	Repeat	Primary & Secondary	Center	Our clinic	Others	No	
349 (19.4)	1447 (80.6)	1102 (61.4)	694 (38.6)	616 (34.3)	538 (30.0)	642 (35.7)	1796 (100.0)
84 (10.1)	744 (89.9)	712 (86.0)	116 (14.0)	259 (31.3)	164 (19.8)	405 (48.9)	828 (100.0)
193 (31.4)	421 (68.6)	347 (56.5)	267 (43.5)	142 (23.1)	201 (32.7)	271 (44.1)	614 (100.0)
47 (16.5)	237 (83.5)	209 (73.6)	75 (26.4)	98 (34.5)	81 (28.5)	105 (37.0)	284 (100.0)
20 (6.8)	273 (93.2)	285 (97.3)	8 (2.7)	143 (48.8)	89 (30.4)	61 (20.8)	293 (100.0)
15 (5.6)	255 (94.4)	260 (96.3)	10 (3.7)	137 (50.7)	33 (12.2)	100 (37.0)	270 (100.0)
18 (8.7)	188 (91.3)	167 (81.1)	39 (18.9)	72 (35.0)	39 (18.9)	95 (46.1)	206 (100.0)
9 (7.3)	114 (92.7)	120 (97.6)	3 (2.4)	81 (65.9)	29 (23.6)	13 (10.6)	123 (100.0)
5 (4.6)	103 (95.4)	102 (94.4)	6 (5.6)	38 (35.2)	13 (12.0)	57 (52.8)	108 (100.0)
21 (28.8)	52 (71.2)	47 (64.4)	26 (35.6)	16 (21.9)	25 (34.2)	32 (43.8)	73 (100.0)
16 (22.2)	56 (77.8)	23 (31.9)	49 (68.1)	24 (33.3)	26 (36.1)	22 (30.6)	72 (100.0)
9 (14.5)	53 (85.5)	49 (79.0)	13 (21.0)	24 (38.7)	16 (25.8)	22 (35.5)	62 (100.0)
10 (27.8)	26 (72.2)	15 (41.7)	21 (58.3)	13 (36.1)	11 (30.6)	12 (33.3)	36 (100.0)
23 (19.5)	95 (80.5)	104 (88.1)	14 (11.9)	44 (37.3)	41 (34.7)	33 (28.0)	118 (100.0)
819 (16.8)	4064 (83.2)	3542 (72.5)	1341 (27.5)	1707 (35.0)	1306(26.7)	1870(38.3)	4883 (100.0)

(p ≤ 0.05)

F6	F7	Other	Seizure	Unknown	Total (%)
52 (2.9)	84 (4.7)	43 (2.4)	60 (3.3)	10 (0.6)	1796 (100.0)
31 (3.7)	68 (8.2)	14 (1.7)	6 (0.7)	1 (0.1)	828 (100.0)
30 (4.9)	12 (2.0)	5 (0.8)	2 (0.3)	0 (0.0)	614 (100.0)
14 (4.9)	10 (3.5)	3 (1.1)	1 (0.4)	0 (0.0)	284 (100.0)
4 (1.4)	1 (0.3)	3 (1.0)	0 (0.0)	0 (0.0)	293 (100.0)
13 (4.8)	16 (5.9)	1 (0.4)	1 (0.4)	1 (0.4)	270 (100.0)
11 (5.3)	18 (8.7)	3 (1.5)	1 (0.5)	0 (0.0)	206 (100.0)
5 (4.1)	6 (4.9)	3 (2.4)	0 (0.0)	0 (0.0)	123 (100.0)
1 (0.9)	16 (14.8)	7 (6.5)	0 (0.0)	1 (0.9)	108 (100.0)
1 (1.4)	3 (4.1)	4 (5.5)	5 (6.8)	0 (0.0)	73 (100.0)
4 (5.6)	6 (8.3)	1 (1.4)	3 (4.2)	0 (0.0)	72 (100.0)
1 (1.6)	1 (1.6)	3 (4.8)	0 (0.0)	0 (0.0)	62 (100.0)
0 (0.0)	3 (8.3)	0 (0.0)	0 (0.0)	0 (0.0)	36 (100.0)
3 (2.5)	6 (5.1)	3 (2.5)	0 (0.0)	0 (0.0)	118 (100.0)
170 (3.5)	250 (5.1)	93 (1.9)	79(1.6)	13 (0.3)	4883 (100.0)

(p ≤ 0.05)

Psychiatric therapy (%)		Physical procedure (%)		Outcome (%)				Total (%)
Yes	No	Yes	No	Return home	Psychiatry hospitalization	Emergency center hospitalization	Other	
579 (32.2)	1217 (67.8)	853 (47.5)	943 (52.5)	1357 (75.6)	243 (13.5)	122 (6.8)	74 (4.1)	1796 (100.0)
273 (33.0)	555 (67.0)	421 (50.8)	407 (49.2)	717 (86.6)	68 (8.2)	23 (2.8)	20 (2.4)	828 (100.0)
222 (36.2)	392 (63.8)	175 (28.5)	439 (71.5)	521 (84.9)	56 (9.1)	23 (3.7)	14 (2.3)	614 (100.0)
95 (33.5)	189 (66.5)	79 (27.8)	205 (72.2)	253 (89.1)	17 (6.0)	6 (2.1)	8 (2.8)	284 (100.0)
69 (23.5)	224 (76.5)	23 (7.8)	270 (92.2)	284 (96.9)	7 (2.4)	2 (0.7)	0 (0.0)	293 (100.0)
76 (28.1)	194 (71.9)	70 (25.9)	200 (74.1)	259 (95.9)	9 (3.3)	0 (0.0)	2 (0.7)	270 (100.0)
55 (26.7)	151 (73.3)	97 (47.1)	109 (52.9)	176 (85.4)	18 (8.7)	7 (3.4)	5 (2.4)	206 (100.0)
38 (30.9)	85 (69.1)	14 (11.4)	109 (88.6)	117 (95.1)	4 (3.3)	0 (0.0)	2 (1.6)	123 (100.0)
32 (29.6)	76 (70.4)	82 (75.9)	26 (24.1)	101 (93.5)	2 (1.9)	1 (0.9)	4 (3.7)	108 (100.0)
13 (17.8)	60 (82.2)	55 (75.3)	18 (24.7)	47 (64.4)	9 (12.3)	11 (15.1)	6 (8.2)	73 (100.0)
14 (19.4)	58 (80.6)	65 (90.3)	7 (9.7)	41 (56.9)	11 (15.3)	12 (16.7)	8 (11.1)	72 (100.0)
30 (48.4)	32 (51.6)	25 (40.3)	37 (59.7)	50 (80.6)	4 (6.5)	5 (8.1)	3 (4.8)	62 (100.0)
10 (27.8)	26 (72.2)	27 (75.0)	9 (25.0)	24 (66.7)	7 (19.4)	3 (8.3)	2 (5.6)	36 (100.0)
47 (39.8)	71 (60.2)	34 (28.8)	84 (71.2)	94 (79.7)	21 (17.8)	2 (1.7)	1 (0.8)	118 (100.0)
1553 (31.8)	3330 (68.2)	2020 (41.4)	2863 (58.6)	4041 (82.8)	476 (9.7)	217 (4.4)	149 (3.1)	4883 (100.0)

(p ≤ 0.05)

Table 4. Logistic regression analysis (odds ratio)

		Neurologic	Digestive
Demographic variables	Age at medical exam	1.010 *	1.003
	Male	1.133	1.267 *
	Primary & Secondary	0.469 *	2.450 *
	First visit	0.925	0.669 *
	Scheduled clinic visit: our clinic	1.161 *	0.586 *
	Scheduled clinic visit: other clinics	1.262 *	0.663 *
Diagnosis	F0	0.332	1.922
	F1	0.198 *	2.743
	F2	0.126 *	2.602
	F3	0.142 *	2.242
	F4	0.168 *	2.547
	F5	0.320	4.236
	F6	0.133 *	2.865
	F7	0.154 *	4.344
	Other	0.272	2.160
	Seizure	0.813	1.010
Treatment after consultation	Administration of psychotropic drug	0.854 *	0.989
	Prescription of psychotropic drug	1.018	0.776
	Psychiatric therapy	1.088	1.100
	Physical procedure	1.188 *	1.721 *
Outcome	Return home	0.569 *	1.767 *
	Psychiatry hospitalization	1.083	1.148
	Emergency center hospitalization	1.271	0.712

($p < 0.001$) and 0.663 at other clinics ($p < 0.001$).

3) Respiratory symptoms

The odds ratio for age increase by one year was 0.967 ($p < 0.001$). The odds ratio for male patients was 0.498 times in comparison with female patients ($p < 0.001$). The odds ratio for Primary & Secondary was 0.394 times that at the Center ($p < 0.001$). The odds ratio for first visits was 2.267 times higher than that of repeat visits ($p = 0.003$).

4) Cardiovascular symptoms

The odds ratio for age increase by 1 year was 1.015 ($p < 0.001$).

5) Side effects of psychotropic drugs

The odds ratio for age increase by 1 year was 0.964 ($p < 0.001$). The odds ratio for Primary & Secondary was 11.449 times

compared to that at the Center ($p < 0.001$).

The odds ratio for first visits was 0.521 times that of repeat visits ($p = 0.016$). The odds ratios for scheduled clinic visit were 1.840 at our clinic ($p < 0.001$) and 2.443 at other clinics ($p < 0.001$). The odds ratio for treatments was 3.328 ($p < 0.001$) for administration of psychotropic drugs, 1.814 ($p < 0.001$) for prescription of psychotropic drugs, 0.668 ($p = 0.006$) for mental therapy, and 0.277 ($p < 0.001$) for physical procedures.

6) Fatigue

The odds ratio for age increase by 1 year was 1.017 ($p < 0.001$). The odds ratio for treatments was 0.505 ($p = 0.002$) for prescription of psychotropic drugs, 0.528 ($p = 0.001$) for physical procedures, and 4.402 ($p =$

Symptom				
Respiratory	Cardiovascular	Side effect of psychotropic drug	Fatigue	Physical pain
0.967 *	1.015 *	0.964 *	1.017 *	1.008
0.498 *	0.793	0.711 *	1.002	0.867
0.394 *	1.055	11.449 *	8.926 *	1.384
2.267 *	0.912	0.521 *	0.644	0.555 *
0.892	0.988	1.840 *	1.298	0.797
0.905	1.172	2.443 *	0.628 *	0.706
58200424.09	70450338.31	39033145.22	0.167	22919554.1
83528766.48	62076144.15	18817899.77	0.453	90161417.62
118419592.5	82803264.02	300205451.9	0.435	61118038.52
312247477.8	111813068.2	92838941.91	0.672	53566027.44
389815458.1	116615589.2	19115303.06	0.397	86328728.66
106643315	1.093	0.687	0.000	82481777.3
302229493.6	149333374.7	25747135.6	0.759	114693548.3
88019278.4	74591960.78	5388521.657	0.497	123844762.3
68584441.54	61425993.56	38789188.02	0.090	55147841.14
36431987.22	21966027.14	1.906	0.132	21503609.86
2.093 *	0.849	3.328 *	1.014	0.787
1.245	1.177	1.814 *	0.505 *	1.500
1.350 *	0.962	0.668 *	0.758	0.736
0.809	0.530	0.277 *	0.528 *	1.274
0.965	0.939	45701860.37	4.402 *	1.484
1.183	0.596	18079403.69	1.323	1.203
1.328	0.564	18683803.52	0.000	0.876

(* = p < 0.05)

0.039) for returning home.

IV. Discussion

1. Overview

1) Sex and age

Seventy percent of patients with physical complaints were female. Factors associated with physical complaints have been identified as mental stress, poor sleep quality, social factors (such as lower education/lower income), lifestyle and obesity, changes in hormone balance during menopause, etc.⁹⁻¹¹⁾, and previous studies found similar results¹²⁾. Women tend to suffer from physical as well as psychiatric symptoms when they cannot adjust themselves to physical/psychological changes in society during life stages such

as puberty, the puerperal period, and menopause¹³⁾. More than half were in their 10s to 30s when they were more active in seeking help. They might have received emergency medical service seeking alleviation of symptoms in the early stage¹⁴⁾.

2) ICD-10 diagnosis

The most prevalent F4 category includes many psychiatric diseases with primary physical complaints, such as panic disorder, somatoform disorder, and dissociative (conversion) disorder. The backgrounds of these diseases include persistent anxiety and hypersensitivity, which induce physical symptoms through hyperactivity of the autonomic nervous system. Examples of specific symptoms are palpitation, hyperpnea,

and chest discomfort. The actual numbers of these symptoms were included in this survey.

3) Classification of patients by new or revisits, clinics visited, and clinics for regular visits

There were more revisits at Primary & Secondary. Among those patients, more than 90% exhibited side effects of psychotropic drugs, fatigue, physical pain, and unidentifiable physical disorder. Most did not have a particular clinic for regular visits. They included patients who had never received a medical examination and patients who did not visit the clinic regularly. Their non-regular visits might be due to bad adherence to regular visits, doctor shopping, or a variety of other factors.

4) Treatment and outcome

Administration of psychotropic drugs occurred at a high frequency, and many of those drugs were for "persistent anxiety and hypersensitivity". Administration of psychotropic drugs at the emergency outpatient service must be conducted with caution so as not to interfere with the patients' self-development of coping ability. Also, consideration of the drug indication as well as the condition of patient is required. The outcome of more than 80% of patients was to return home, but there were 14.1% cases of hospitalization. Even if patients were assessed as having no major physical problems in triage at the medical examination, careful treatment might be required considering the details of each symptom.

2. Investigation of each symptom

1) Neurologic symptoms

The odds ratio at Primary & Secondary for neurologic symptoms was 0.469. However,

many of those cases were brought to the emergency service because their neurologic symptoms, such as consciousness disorder and convulsion, looked very serious. Thus, people around those patients may have called for an ambulance. The odds ratios of 1.188 for physical procedures and 0.854 for administration of psychotropic drugs suggest that those patients were treated for their physical condition very carefully after medical examination at an emergency outpatient service. The odds ratio for the outcome of returning home was 0.569, which also suggested difficulties in deciding to send patients home only after a brief examination at the emergency outpatient service. Thus, some required a follow-up examination by hospitalization.

Consciousness disorder was the most prevalent among the specific symptoms at the medical examination. In the detailed physical examination and history taking, 42.1% of cases were diagnosed as stupor, which indicated difficulties in differentiation between consciousness disorder and stupor at the site of psychiatric emergency. On the other hand, 12.7% of patients with JCSIII symptoms were identified as having various and serious physical complications, such as intracranial disease and electrolyte abnormality, after detailed examination, in spite of similarities in appearances to stupor. When the primary complaint is "unresponsive when spoken to", detailed physical examination is necessary, regardless of the psychiatric history.

2) Digestive symptoms

Being in the age group of 10s to 30s was the third most prevalent factor, followed by side effects of psychotropic drugs

and respiratory symptoms. Multi-logistic regression analysis showed that the number of male patients was 1.267 times more than that of female patients, and the number of new patients was 0.669 times that of revisiting patients. The odds ratios for regular visits were 0.586 for our clinic and 0.663 for other clinics. The number of medical examinations at Primary & Secondary was 2.450 times higher than at the Center. This suggested that young male patients, who did not have a particular clinic for visiting and without regular clinic visits, re-visited psychiatric emergency outpatient services irregularly.

In this group, there were high frequencies of vomiting and nausea followed by epigastric distress and stomach ache. Young patients who have immature verbalization and patients with intellectual disability tend to have digestive symptoms caused by stress in coping with daily life¹⁵⁾. Digestive symptoms induced by mental stress include irritable bowel syndrome and functional dyspepsia. Treatment of these syndromes is often difficult, since symptoms persist without obvious abnormalities in abdominal X-ray and endoscopy and fecal examination.

3) Respiratory symptoms

There was a high frequency of young female patients who received medical examinations due to their hyperpnea, mainly because of neurologic symptoms¹⁶⁾. Most respiratory symptoms were hyperpnea in this survey as well. In addition, the sex ratio and age distribution were also similar to the previous findings.

Multi-logistic regression analysis showed an odds ratio for new patients about 2 times that of patients who were not new. The first

attack of hyperpnea might have resulted in an ambulance request due to the sudden onset of symptoms, as well as the serious feeling of the patient. After receiving repeated education on the disease, patients can handle the symptoms by themselves. Patients do not need emergency outpatient services; thus, there is no increase in revisits.

Immediate treatment for hyperpnea is desirable, since this symptom causes severe pain. In this survey, odd ratios were 2.093 for administration of psychotropic drugs and 1.350 for psychiatric therapy. This suggested that both mental and physical treatments were conducted by immediate administration of sedatives and supportive psychiatric therapy for anxiety. Recently, intervention training programs, such as Psychiatric Evaluation in Emergency Care (PEEC), have been provided by the Japanese Association for Acute Medicine and Japanese Association for Emergency Psychiatry, which enable treatment for a wide range of symptoms, including hyperpnea¹⁷⁾.

4) Cardiovascular symptoms

Although characteristic profiles were not determined for cardiovascular symptoms, the frequencies of palpitation and chest pain/chest pressure were almost the same. According to the reports of the Japanese Educational Clinical Cardiology Society, about half of the 190 replies to questionnaires were considered as unidentifiable complaints. Among them, arrhythmia, such as palpitation, chest pain, and other chest symptom complexes, accounted for 46%, 43%, and 10%, respectively, which almost matched the results of this survey¹⁸⁾.

5) Side effects of psychotropic drugs

Many young active patients were

categorized as F2, and akathisia^{19, 20)} was the most frequently reported side effect. The odds ratio for regular clinic visits at our clinic was 1.840 and at others was 2.443. These high odds ratios suggested good adherence of patients to regular visits. At the emergency outpatient service, many patients went home after administration of an antiparkinson agent or benzodiazepine without a change in prescription. However, there were some cases that required hospitalization due to malignant syndrome or serotonin syndrome. It is important to explain possible side effects as well as the details of those symptoms in the daily outpatient service as part of patient education.

6) Fatigue

Fatigue was observed in a high percentage of patients in the F3 category. Fatigue is listed as a diagnostic criterion for depression episode in the ICD-10; thus, it is an important physical symptom of mood disorder. In the present survey, we also found anorexia associated with depression in the digestive symptoms. Anorexia was seen in 56 cases, whereas fatigue was observed in 270 cases. Although insomnia and anorexia are common symptoms of depression²¹⁾, an important association of fatigue with depression was indicated from our results. At the emergency service, it is important to differentiate physical diseases from depression in patients with fatigue. When depression is suspected from physical symptoms, the diagnostic accuracy might increase with consideration of anorexia in addition to fatigue.

Middle-aged and elderly males with depression tend to have a higher percentage of suicide in Japan²²⁾. These results suggest

to us the need for further investigation of the association between fatigue and depression.

3. Study limitations

We selected only one physical complaint for statistical analysis, which was reported by patients at the beginning of the medical examination. Many patients with physical complaints tend to have several complaints in addition to the primary complaint. The combination of those complaints can be diverse. This makes identification of the particular causative organ, as well as treatment at the emergency outpatient service, very difficult. Further studies are needed to investigate the treatments and outcomes of cases with several physical complaints.

4. Conclusions

A survey of physical complaints at psychiatric emergency services classified by symptoms revealed the difficulties in differentiation between stupor and consciousness disorder, as well as the fact that patients without regular clinic visits tend to re-visit the emergency outpatient services irregularly. On the other hand, proper treatment at the emergency service or patient education at the daily outpatient service should prevent the use of emergency service regarding respiratory symptoms. In addition, the strong association of fatigue with depression found in this survey would help improve diagnostic accuracy. Association of each physical complaint with the psychiatric diseases found in this survey suggests a certain direction for the medical examination, not only at the emergency service, but also at daily outpatient services.

When psychiatric patients receive

emergency outpatient services because of physical complaints, patients with serious physical disease are eliminated from psychiatric treatment regardless of symptoms of their primary complaints. This principle does not change. Treatment for physical complaints at the psychiatric emergency service should be conducted by obtaining a psychiatric history as well as by identifying physical diseases by consultation with physical disease specialists.

The findings and challenges in physical complaints at psychiatric emergency services found in this survey would provide clinical significance, not only for psychiatric doctors, but also for other medical care doctors. If these findings become common knowledge for the treatment of emergent patients who are suspected to have a psychiatric history, a long-term liaison between psychiatric and physical departments in medical care will be enabled through the psychiatric emergency outpatient

service. This also provides benefits for patients, thus leading to alleviation of physical complaints.

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身体的愁訴を主訴として 精神科救急外来を受診した患者の実態調査

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要旨

身体的愁訴で精神科救急外来を受診した患者について、愁訴と精神疾患との関連性、身体疾患検索の重要性などを明らかにすることを目的とした。2004年から2012年の間、身体的愁訴を主訴として岩手県高度救命救急センターおよび岩手医科大学附属病院一次二次外来を受診した4,883件を対象とし、愁訴を診療科・領域別・頻度別に分類して愁訴の詳細や背景因子などを調査した。対象は7割が女性でF4圏の比率が高く、8割が帰宅の転帰であったが入院を要する例も存在し

た。神経系症状は意識障害が最多であり入院の比率が高かった。消化器系症状は通院先不定の若い男性患者が多かった。呼吸器系症状はF4圏の若い女性が多く向精神薬投与や精神療法を受ける比率が高かった。向精神薬の副作用は若年のF2圏の受診が多かった。以上より、精神科救急における身体的愁訴は様々な精神疾患と関連を持つことが示され、一方で、身体疾患検索の必要性も示唆された。