Antipsychotic-induced Encephalopathy : Unrecognized drug poisoning

Satoshi HAYAMA Division of Cognitive and Information Sciences, Faculty of Integrated Human Studies, Kyoto University, Kyoto, Japan E-mail hayama@attglobal.net URL http://www5e.biglobe.ne.jp/~hayama/

1. Abstract

Background and Objective: There is inadequate understanding of chronic encephalopathy as one of the irreversible side effects of antipsychotics. The objective of this study was to analyze factors associated with difficulties in recognition of antipsychotic-induced encephalopathy, to establish it as a definite disease entity, and to discuss medical and social solutions. Methods: Inquiries were sent to patients and lawyers, researchers were interviewed in various countries, and information was used from the literature.

Results: It was found that patients in the acute stage had not only marked extrapyramidal

symptoms but also other symptoms including sleep disorder, anxiety, epilepsy, and mild dementia. Patients in the chronic stage reported mental fatigue accompanied by heavyheadedness and could not perform work for more than a short time. X-ray CT revealed cortical atrophy, and electroencephalography revealed brain waves in the second stage of sleep during arousal. The disorder is incurable; while its activity gradually decreases after adequate sleep and rest, it increases with overwork or intense mental efforts. The severity of this disorder differs markedly among different patients. Patient with a mild form complain only of indefinite symptoms while those with a severe form are confined to bed for life. Chinese medicine, acupuncture, or hyperbaric oxygen therapy is ineffective. In general, physicians unable to appropriately diagnose this disorder and patients may die without awareness of the condition in mental hospitals or institutions.

Discussion: The most common disorder-specific symptom in the chronic stage is termed here "brain exhaustion". Antipsychotic-induced encephalopathy is observed alone or is accompanied by psychosis. Patients with normal brains and mild mental disorders tend to develop this condition in contrast to patients with schizophrenia. For feedback purposes and to facilitate diagnosis, patients should be interviewed based on past records to determine whether previous symptoms were correctly diagnosed.

Conclusion: A comprehensive survey for each country would be desirable. Since diagnosis is generally difficult, it would also be necessary to establish a social system that allows for diagnosis by 'self-reporting'. The establishment of "the right to self-diagnosis" is also necessary. Reference: Hayama S (2002): Encephalopathy by Antipsychotic, Malpractice and View of Schizophrenia. 12th WCP Yokohama (available at http://www5e.biglobe.ne.jp/~hayama/)

2. FOREWORD: Historical overview

Fifty years have passed since chlorpromazine arrived and an immense number of patients now take antipsychotics.

The history of antipsychotic therapy is also a history of suffering side effects.

Tardive dyskinesia, a movement functional disorder is one irreversible side effect and recently serotonin syndrome (anti-depression agent) and neuroleptic-induced deficit syndrome (NIDS) have been advocated.

Antipsychotics may or may not bring about irreversible encephalopathy, an aspect that has yet to be resolved. In Japan, Prof. Kenichi Harada wrote on the subject of whether or not antipsychotics may induce irreversible brain damage, and concluded that we need a precise comparative study on the prognosis of untreated patients and of long-term antipsychotic therapy. (The Organic Psychosis, 1976). Prof Michio Toru advocated that "psychopharmakotoxische Encephalopathie", with respect to the structural dementia named by Gruhle, is caused by antipsychotics (A Modern System of Psychiatry 1979). Although psychiatrists showed interest in this subject from the beginning, research on encephalopathy induced by antipsychotics reached an impasse and effective methodology ceased to develop. Using molecular biological approaches, research techniques that observe the antipsychotic influence on the cell in culture or in laboratory test animals have been developed. However, since the concentration in blood is often higher than clinically relevant therapeutic doses, conclusions are difficult to draw. Further, with the development of pharmacogenetics the results of these types of experiments are seen as difficult to apply in a meaningful way to clinical diagnosis. Regarding neuropathology, necropsies yielding equivocal pathologic information such as encephalopathy by antipsychotics have reported mostly from Japan rather than from Europe or the United States. One reason is since, in pathology, the borderline between clinical psychiatry and basic medicine is not so deeply distinguished compared with Europe or the United States. Cases in which mortality occurs from an acute term are not available for investigation so no information can be obtained. Important information appears only in rare cases where death after a sufficient time has lapsed to allow for obtaining a sample of the tissue lesion. Through clinical psychiatry, efforts have been made to understand the patients through clinical examination ¹ However many antipsychotic-induced encephalopathy cases have complications with schizophrenia apparent. The clinician cannot easily distinguish encephalopathy from schizophrenia since the same mental aberrations occur. Citizen groups (e.g. Geneva initiative on Psychiatry) are interested from the point of view of the rights of patients. Further, an advanced scholarly investigation required on the relationship between antipsychotic-induced encephalopathy and patient rights has not been forthcoming. For these reasons the problem has been put on one side for a long time, although it is troublesome to many doctors and patients, and is a neglected corner of psychiatry. The following is an outline of antipsychotic-induced encephalopathy.

Head-CT cortical atrophy existed at 23 years of age (Fig 3-a). The EEG showed a spike wave, 4 The patients do not have disturbances of thinking, delusion, experience of influence, auditory Flatter Affektausdruck. reversed phase, and there were irregular size waves. hallucination, without the cases which were accompanied by psychosis.

Of course another possibility was for example melancholia, but other possibilities were 5There is no possibility of other poisoning diseases.

contradictory. At 35 years of age with a head-MRI (Fig 3-b), MRA (Fig 3-c) some cortical atrophy points showed recovery . Atropia neurons recovered in cell size by autotherapy. With sleeping, EEG is classified into four stages. Electroencephalography shows brain waves in

the second stage of sleep during arousal. Usually human lose consciousness at the first stage. But in awaking the second stage wave spindle, K-complex appears. In this case the patient decided not to go to court.





10. Therapeutic tactics

Chinese medicine, acupuncture, or hyperbaric oxygen therapy is ineffective. Case 1 had taken Chinese medicine for 10 years, sometimes acupuncture and hyperbaric oxygen therapy 1h/day at x2 air pressure ×45 times. Acupuncture was effective for insomnia. However was ineffective for antipsychotic-induced encephalopathy.

11. The involvement of risk-factors.

Teenagers, elderly people, and patients with encephalopathy. Head injury as previous illness. Patients with normal brains and mild mental disorders tend to develop this condition compared with patients with schizophrenia.

12. Tardive disorder to be able to occur

1 easy to be obesty.

2 tend to carcinogenesis.

3 In adolescent (glioma) There is a case of giant cell gliobrastoma appeared in the patient who was given antipsychotics for 11 years from 9 years old to 19 years old. The relation of cause and effect

is not clear.² (The relation of cause and effect is not the main point of presentation.) It is the difficult problem whether the glioma is developed by the administration of antipsychotics. If such the case can occur, the patient is the case administered for a long term since childhood. The Elder patients case

Parkinson's Disease

Case 2

NASH

term. Although antipsychotic is not nominated in the list of medicine which induce non-alcoholic steatohepatitis (NASH), investigation will be required from now on.

Debilitation of cardiac function

In the case of the patients who take antipsychotic long term, cardiac function sometimes debilititated . Palpitation, breathlessness and fluctuate feeling of body when the patients wark, are important symptoms. Although the finding is not clear on the testing, we should be know it. Changing of character

GABA increase and the dopamine decrease. The character of the patients change to epileptic personality

13. Cases where the patient took antipsychotic due to incorrect

Rp do 14 days (Serenace 2mg). In Japanese society individuals who are considered incongruous are often attacked. The doctor considers this word a symptom of a mental disease.

KARTE next year DIAGNOSIS V.a(Verdacht auf) Schizotype Personality MAIN SYMPTOMS

Insomnia Beziehungsidee Isoliert CONDITION OF DISEASE Difficulty to waking up in the morning since entrance to senior high school. Almost always late for school. Not getting along with schoolmates Orgueil (verstiegen) Stellungs nehme against school system.

Antipsychotics were administered because a physician diagnosed "idea of reference" as symptom of schizotype personality disorder. Since then, the physician continues taking the symptoms of antipsychotic encephalopathy as a mental disease.

n case report of No. 2

The patient was administered an antipsychotic because the patient is noisy and troublesome to the staff and other patients in the ward.

18. The situation of the patients

The patients cannot understand their own illness because their problems are not classified as a disease in the medical science. Some of the patients understood their illness as due to The fatty liver is sometimes recognized in the patient who have taken antipsychotic for long antipsychotics. Also the patients may lose human relationships and become isolated in society. The society does not believe that they may have inappropriate medical diagnoses. The social

distrust of patients in psychiatric departments is associated with the development and prognosis of the disorders involved.

The status of patients concerned with this pathology are classified into three groups. *The patient who misunderstands his own symptoms of mental disease as drug-induced brain disease ---- group A

*Antipsychotic induced encephalopathy patients who do not suspect their illness was druginduced --- group B

*Antipsychotic induced encephalopathy patients who suspected their illness was drug-induced --- group C

To distinguish group A from group C requires care.

Group A has a delusion of persecution from physicians and nurses, and health damage from



3. The disease idea

In a wide sense antipsychotic-induced encephalopathy is a general term covering chronic encephalopathies which are the irreversible side-effects of antipsychotics. Irreversible side effects rank second to neuroleptic malignant syndrome, tardive dyskinesia being first

However, neuroleptic malignant syndrome and tardive dyskinesia are concepts arising concerning the morbid state, which are easier to judge.

If an original morbid state is considered, neuroleptic malignant syndrome and tardive dyskinesia will be interpreted as a form of antipsychotic-induced encephalopathy (Fig 1).

In a narrow sense, antipsychotic-induced encephalopathy, as a disorder is 'incurable'; its activity gradually decreases after adequate sleep and rest, but increases with overwork or intense mental efforts. The severity of this disorder markedly differs among patients. Patients with a mild form only complain of indefinite symptoms while those with a severe form are confined to bed for life. Patients with a serious condition experience repeated episodes of a prodromal condition of unrecognized neuroleptic malignant syndrome.











diagnosis

The stage of resistance

The patient is surprised by the fact that the diagnosis is mental disease and is given Group C tends to continue talking about only the encephalopathy caused by antipsychotics for antipsychotics. The patient tries to make the doctor notice his misunderstanding. The patient many years resists administration and says the physician misunderstands. The patient is stressed and in opposition to his surroundings. The patient's feeling is a 'flattening' due to the influence of the antipsychotic. This stress and 'flattening', as side effects, are seen as the symptoms of schizophrenia. The misdiagnosis have established like this.

The stage of weakness

In spite of the patient trying to make the physician understand that there is a wrong diagnosis the medications are increased so that the patient gradually weakens, loses the ability to judge properly and becomes desperate.

The stage of death

The patient is already in a dangerous condition. The delusion which is similar to a delirious state appears and he may die suddenly due to an extremely weak heart.

14. Pathological findings

The autopsy of such cases is obscure is not often performed in Western countries where neuropathology is established as strong field, but it has been performed in Japan, since there is

no barrier between clinical medicine and neuropathology.

Case reports are as follows. Neuroleptic malignant syndrome

Case report No.1 3

Necropsy showed brain edema and congestion.

Histopathological examination showed slight fibrous hypertrophy of pia mater, lymphocyte invasion around the vein, diapedetic hemorrhage, and findings thought to be circulation failure such as increased glias in the surface layer of the cortex and ischemic degeneration of Purkinje cells. A decrease and vanishing of melanin pigment in nigra and ceruleus nucleus were

The fatty denaturation (fatty metamorphosis) on liver cell was observed in other organs Case report No.2 4

The cerebrum and cerebellum were atrophied respectively; third ventricle, lateral ventricle, and cerebral aqueduct were slightly dilated. Atrophia and cell sclerosis of neurons were observed in the pyramidal cell layer; such lesions were observed in each lobe, but were slightly more severe in the posterior lobe. In cornu ammonis, cell atrophy sclerosis and integration of cells were observed.

Slight atrophied neurons, pseudoneurophagia, and glial star were observed in basal ganglia especially, putamen, pale globe dentate nucleus, caudatum, and nucleus subthalamius.

The neurons degenerated and atrophied with neuronophagia and glial star on tegmentum mesencephali specially gray substance and colliculus inferior; growth of asteroid glias was also observed.

In the nucleus, nervi oculomotori and nervi hypogloosai neurons were atrophied and consolidated. Those neurons had many microvacuoles which had vascular degeneration chromophobic and amorphous shinnig . Pulsion of oligodendroglia were also found

Atrophia and shedding of neurons was observed on nucleus olivaris in medulla oblongata; fibrous gliosis was found.

Optional, systematic and continuous necrosis of the cell was observed on the cerebellar cortex-dentate nucleus centrifugal.

Atrophia and shedding of Purkinje cells was observed on the hemispherium and cortex of vermis; Bergmann glias had grown

Disruption of white matter by macrophages was observed from cerebellar medulla to dentate nucleus. Fibrous gliosis was observed in cerebellar white matter.

Atrophy and shedding of most neurons were observed on dentate nucleus and fastigium; medullary sheaths became light around dentate nucleus.

Disruption of white matter was also observed in hilus with bundled macrophages; the macrophages had been distributed on the superior cerebellar nuclei degenerated severely; those shedding had continued to red nucleus.

It is difficult to save the patients from the situations discussed here Disruption of white matter with macrophages were observed in red nucleus and rubral What methods should we consider to solve this problem? radiation, and those findings had diffused toward thalami. Fibrous gliosis was found. The patient applies to the complaint arbitration body in the medical organization. In response Atrophia, shedding, of neurons and replaced by fibrous gliosis were observed on lateral nucleus of thalamus; slight shedding of neurons with gliosis was also observed on the dorsal to the request from the committee, a local medical association performs feedback diagnosis. Comprehensive surveys for each country are awaited. Since diagnosis is generally difficult, medical nucleus. it is also necessary to establish a social system that allows diagnosis by self-reporting. The Around the areas of abnormality in Purkinje cells on uvula vermis, nodulus, and tonsil, normal bodies were maintained; but outside those areas, most of the Purkinje cells were lost. establishment of self-diagnosis is also necessary. There are reports of a neuroleptic malignant syndrome case. The pathological findings on the case of antipsychotic-induced encephalopathy seem similar. Also there are the reports on tardive 23. The right to self-diagnosis dyskinesia: Diagnosis is the medical act which the doctor can perform with social qualifications. Tardive dyskinesia In current law, the patient cannot carry out self-diagnosis. Corpora amylacea were observed on double pale globe outer segment, usually there are only a However, the diagnosis of antipsychotic-induced encephalopathy by doctors is very difficult and

other medicines. After sometime most of the patients move to other delusions and do not talk about antiphychotics.

19. Epidemiology

Patients with antipsychotic-induced encephalopathy have a prevalence rate of 0.01% of all people diagnosed with mental disease worldwide. With the development of antipsychotic use, where safety is thought important, treatments for side effects induced by such medicines will become more appropriate. However, misdiagnosis will always be with us in psychiatry. The history of the antipsychoticinduced encephalopathy will not end. The social factors which associated with this unrecognized drug poisoning.

1. There will be continued political abuse of psychiatry⁸. 2. To misdiagnose clear-cut personality in too regulated society. 3. The evil of mental hospitals. 4. The incomplete ability of clinicians.

20. Diagnosis-removing criteria 1 There is the possibility that the primary disease symptoms and the items mentioned in the clinical record are entirely misdiagnoses. 2 The patient may not have any symptoms of mental illness for more than five years.

Medical certificate (Diagnosis-removing certificate)

Patient name

Diagnosis

Diagnosis of is removed

Circumstances

Patient A was examined at hospital B because of ... Hospital B concluded the complaints of of patient A as, diagnosed, and treated. But the symptoms of patient A did not improve. Patient A was examined at our hospital, and mentioned doubt to the diagnosis of hospital B. The chart of hospital B was inspected. Based on the inspection, patient A was interviewed again. As a result, there is the possibility that hospital B had misunderstood a number of the complaints of patient A.

Therefore, diagnosis of hospital B for patient A can be removed. Medical institution

Physician

21. Analysis of the reason which makes recognition of the disease difficult

Most of the symptoms caused by antipsychotics of may also appear to be due to mental disease, since it is difficult to distinguish the symptoms caused by these two factors. There are few physicians with enough experience of examination of encephalopathy caused by antipsychotics since it involves an interdisciplinary research field ranging over psychiatry and neurology.

In the case of the patients who insist on that they are suffering antipsychotic-induced encephalopathy, people tend to think that the patients are suffering a delusion of persecution and not a drug-induced brain disease. Social distrust of patients at the psychiatric department is associated with the development and prognosis of disorders.

22. The social solution

specifically observed.

The weights of the brain were 1100g and 1350g.

Fig 1

4. The symptoms

< acute stage >

Patients in the acute stage have not only marked extrapyramidal symptoms but also other symptoms such as difficulties in falling asleep, anxiety, epilepsy, and mild demential

<chronic stage >

Patients in the chronic stage feel mental fatigue accompanied by heavy-headedness, and cannot continue work after a short time. We termed the most common disorder-specific symptom in the chronic stage "brain exhaustion".

The symptoms are sometimes accompanied by disturbances in the memorization process and some symptoms of higher brain dysfunction. Antipsychotic-induced encephalopathy is observed alone or accompanied by psychosis. The patients express it as "mental fatigue." This should be distinguished from fatigue of the body by diabetes etc., or mental fatigue due to mental illness.

Due to a lack of suitable vocabulary, patients use the term "tiredness."

The pathologic condition of brain exhaustion is the non-localized functional disorder of nerve cells which regarding mental fatigue is work-associated.

When the patients are at rest, the symptoms are few, however, as soon as they move neurons lose functioning.

Although brain exhaustion is also a symptom of Parkinson's disease, brain exhaustion in Parkinson's disease is mild, and it is obscured by other symptoms of the disease.

Another type of encephalopathy is associated with numbress, palsy, the disorder of visual acuity. However antipsychotic induced-encephalopathy does not consist of such functional disorders.

The patients tend to heal naturally, very slowly and after 6 months recover. They then become calm and possess a steady frame of mind. However, brain exhaustion persists and sufferer insomnia, and their thinking is swayed by emotion (i.e. anxiety, fear) along with amnesia associated with aging.

5. The classification of the symptom (Fig 2)

The symptoms caused by only antipsychotic encephalopathy

brain exhaustion, memory disturbance, amnesa, (parkinsonism, extrapyramidal symptoms).

The symptoms caused by only mental disease: delusion, auditory hallucination, experience of influence, thinking disturbance.

The symptoms caused by mental disease and antipsychotic encephalopathy include:

anxiety, insomnia, epilepsy, transient delusion, mood disturbance, catalepsy (catatonia), injuring of self and harming others.

The delusions caused by antipsychotic encephalopathy:

There is a tendency to display severe fatigue although it is temporary. Psychic trauma exists in the background. The ability to criticize oneself is maintained





Fig 3-c

The 2nd case had taken haloperidol, 2.4mg [/day] 100 days and was a 48 years-old woman. Chlorpromazine and diazepam were used together. The first diagnosis was obstructive of the first medical examination.

arteriosclerosis. We should know which mental conditions are easy to misdiagnose, such as idea of reference, After ineffective prostaglandin medication, she was diagnosed with hysteromyoma. After the idea of observation, depersonalization, loneliness and other delusions. Talking words about the operation, dehydration and anxiety hysteria appeared. The doctor gave haloperidol as a stomach idea which thought about oneself and ones surroundings with original word at the teen age and medicine to the patient. Extrapyramidal syndrome, including Parkinson's syndrome appeared the rare story which realized around the patients. We are easy to misdiagnose such words. And very strongly. Hypermyotonia, sudoresis, dyspnea, and IQ decreases from standard levels to 60. we tend to misdiagnose catatonia as caused by side effects, just as catalepsia is "caused" by She was diagnosed as belonging to the 1st class of physical disability with both upper-limb schizophrenia. functional disorder due to Parkinson's disease and obstructive arteriosclerosis, and a trunk We should be know next important peculiarity about differental diagnosis. The case of functional disorder with a difficulty of standing up. The disability has recovered to the state of antipsychotic-induced encephalopathy tend to ask others for help, however the case of the third class of a physical disability after 15 years. The present symptoms are headache and worsening of schizofrenia tend to seek the solitude. If the patients harm others, the case of lacking of simultaneous movement. antipsychotic-induced encephalopathy behave violently in order to change relation with those Head CT showed cortical atrophy. The patient petitioned strongly to lawyers concerning chronic

brain problems due to haloperidol and has received 10 million yen.

Symptoms of antipsychotic-induced encephalopathy on other patients. *While moving, there is muscular stiffness. After movement: fever, despondency and a state of

few such areas. Moreover, Corpora amylacea were found on astroid glia cell processess with the special form such as the waste pieces of thread⁵.

15. Pathological condition

The particularity of the pathological condition is non-localized degeneration of the neuron⁶. Even if it is slight, the antipsychotic influence on all neurons, and irreversible damage remains. In human brain the axon do not extend without any order system.

Extension of the axon between neurons is the choosing beheiber which specific neurons choose the specific neuron, and it has controlled by the individual soul

It is such a neuronal network that we call "character"

The essence of the pathological condition of schizophrenia is the disorderly extension of the axon, and the evil spirit has controlled the formation of the neuronal network in addition to the individual soul. (This thought is different from modern psychiatry, however I picked up the old thought from the point of view of the difficulty of having insight into schizophrenia with modern science, technology and culture. I do not possess such discrimination).

The pathological condition of antipsychotic-induced encephalopathy is that antipsychotics reduce the importance of life maintenance of the neuron among the metabolism or the functions which controlled by dopamine within the neuron, and it lead on set to lose functions of neurons. Furthermore, if the central pathological condition of schizophrenia is an abnormality of gene expression in the neuron, and if antipsychotics normalize it, the pathological condition of antipsychotic induced-encephalopathy is the accumulation of unusual and harmful proteins from the results of an examination, the application is rejected. by abnormalities of gene expression in the neuron leading to neuron death⁷. Neuron death, degenerative atrophy, catecholamine disorder, abnormal protein-genesis, from destroyed genes by various medicines and another unknown pathology possibly Alzheimer's and/or Parkinson's disease may have been present.

16. The point of feedback diagnosis and differental diagnosios

As a feedback diagnosis, patients should be interviewed based on past records to determine whether previous description of symptoms was correctly diagnosed. Misdiagnosis develops and may be systematized according to the process of medical

To finding out the first step of feedback diagnosis, first one needs to examine the clinical record

around them while the case of worsening of schizofrenia behave violently in order to break off relation with those around them.

17. The practical feedback diagnosis

sometimes impossible at present. The interpretation of the law that accepts the right to self-diagnoses of the patient also is just from the viewpoint of protection of human-rights.

Definition:

Diagnosis is performed by the physician for the patient. However, when misdiagnosis is threatening the health of the patient, the patient can diagnose the disease.

24. The social system to save patients (Fig 4).

1 The patient applies to the Ministry of Health, Labor and Welfare.

2 The Ministry of Health, Labour and Welfare requests a medical specialist who might consider the application.

3 The medical specialist decides whether the application should be accepted, re-considered or rejected. After that, the decision is reported back to the Ministry of Health, Labor and Welfare.

* In case of acceptance, the contents of the patients' application is regarded as a medical certificate which is written by the physician; the patient is able to get recognition as a victim of drug-induced brain disease for applications for disability benefits etc. * In case of re-consideration, the medical specialist decides whether the application should be accepted or not after interviewing the patient.

* In the case where the medical specialist physician considers the application is not supported

The Ministry of Health and Welfare



The Patient interviewing The Doctors





examination, one such misdiagnosis may lead to others.

Fig 2

The first sudden delusional idea is delusive remembrance based on memory After that, delusional idea lead delusional memory. And delusional memory lead The delusion seen in antipsychotic-induced encephalopathy is similar to Korsako rather than schizophrenia, from the view of the pathological condition. The symptoms of mental fatigue also exist in patients with schizophrenia and However, the degree severity of the symptoms of schizophrenia and depress than those of antipsychotic encephalopathy. Mental fatigue is rare even in schizo depression. In case of mental disease, it is frequent that a decline of volition is of mental fatigue. In the case of antipsychotic encephalopathy, with enhanced voliti strength is unable to follow volition, and mental fatigue occurs as a comple

6. Case Report

--Case 1--

15 -17 age. Previous illness. Basal skull fracture and mild meningitis. Diagnose "v.a schizotypal personality". The physician misunderstood, as an idea of reference said "I am like Dostoevsky's hero (meaning he resembled Dostevsky's hero)" at the examination. The after effects were meningitis and the symptoms were insomnia doctor gave a major tranguilizer and antidepressants, for example haloperidol 10mc years.

After starting the medicine, insomnia worsened, Parkinsonism, catalepsy, fever stage of syndrome malin, dyskinesia (oculogyric crisis, opisthotonus, projectir akathisia, myotonia, epilepsy (main tonicoclonic in sleeping time) started one or tw month, also uneasiness, conditions of "unstable spirit", and lowering of intellect Mild dementia, amnesia, forgetting his own name in a short time, derangement of register, for disturbance of memory, mistake the number when he count as chairma decision, etc.

At 17 age the patient changed hospital. A new doctor correctly diagnosed neuro prescribing haloperidol and gave a minor tranquilizer. Nobody understood his illness

term prognosis. When the patient said his illness was due to the medicine this was and he was refused examination by some doctors in Japan. By 20 years of age the bedridden and even watching TV was tiresome. One morning, when the patient opened the window, the milkman stopped with his

patient said "The mental hospital is searching for me, they want to kill me. Then staff came here, a staff member of hospital pretended to be a milkman and came in

my house. He watched out trying to trap me." Patients enter hospital because of this delusion. After many years such symptoms have gradually become normal. After 5 years, a

Haloperidol, there is still a high tendon reflex. Now after effects are tireness (brai insomnia, headache (chronic: not localized to awake time, gradually increasing tiredness, heavy headed feeling, not psychogenic). Note that diazepam and triazolar taken.

When diazepam and triazolam were stopped, the circadian rhythm went into disorder. This headedness, and cannot continue work after a short time.) case did not come to trial. The next day, when going to work, his brain was tired, absentminded 3 X-ray CT shows cortical atrophy which does not have other explanations (undergrowth etc). and he could not move. One day he would go to work and the next day he was in bed. On

	*While moving, there is muscular stiffness. After movement: fever, despondency and a state of	m. mo practical locabacit diagnocio
	lethargy.	Clinical RecordCase 1
	*Fatigue of the eye, decrease in the ability to think, feeling pressure on the body.	MAIN COMPLAINT Insomnia
	*Emotional rigidity and a stiffened body.	MAIN SYMPTOMS
	*Could not turn over in bed.	Insomnia
		Beziehungsidee
	*Incontinence	Isolieren
	*Walking in a straight line was not possible, movement to the side and the walking to backwards	DIAGNOSIS V.a(Vardacht auf) Schizotypal Personality
	were impossible.	
	*Could not perform a given text composition.	CONDITION OF DISEASE
	*Was always sleepy, possessed sleep disorder.	STATEMENT from Mother
	*When watching television, suddenly the screen would become black, only the upper half being	Difficulty in waking up in the morning. Since entrance to senior high school,
ry disturbance.	visible. Dyspnea was present and the patient could only work for only about 3 hours.	numerous times was late for school (33 times from April to July). The person involved said that
d the delusion.	*Always want to lie down.	the falling asleep time was AM2:00-AM3:00.
akov syndrome	*Headache and numbness.	From 0:00 futile efforts to sleep were made.
,	*Body conditions tends to change with change of the weather.	From junior high school age there was difficulty getting to sleep.
nd depression.	*Change of weight is significant. Feeling of cold and spine was aching.	In those days, her husband changed job, and the family was not stable.
ssion are less		The person involved said "when go back to home I cannot feel relief, therefore I cannot sleep".
izophrenia and		LIFE HISTORY
observed with	7. Examination fingings	EDUCATIONAL BACKGROUND
	X-ray CT showed cortical atrophy and electroencephalography showed brain waves in the	senior high school 1 grade
olition, physical	second stage of sleep during arousal.	Performance - junior high school age-first middle and end-high-
olete contrast.	Cortical atrophy is the only finding of Head-CT, Head-MRI. MRI sometimes revealed small	senior high school-middle-
		CHARACTER AND HOW IT CHANGED
	findings resembled multiple cerebral infarctions on tardive dyskinesia patients.	
	In PET. CMRGlu (Cerebral Metabolic Rate of Glucose) and CMRO2 (Cerebral Metabolic Rate of	"easy to worry type" and introvert
sed wrongly as	Oxygen) may decrease.	July-26 Finachlafatarung
nce, the patient	Small sharp spikes (SSS) was found in an epilepsy case after electroencephalography. Oddly	Einschlafstorung
he first medical	electroencephalography sometimes shows brain waves in the first stage and the second stage	from junior high age: deterioration from junior high 3 grade.
nia. The	of sleep during arousal. This finding suggests the functional disorders of neurons are located in	last night go to bed at pm 10:00. But fall asleep time is AM 2:00.
	the whole of the brain.	Anlaß (start) is read book (in days).worry about that contents.
mg/day for two	It is odd that background activity is irregular. This will change to regular, rhythmic patterns over	Isoliert in the school.
	10 years. A sporadic theta activity sometimes appears.	Beziehungsidee.
ver, prodromal		Kritik had.
cting glossal),	8. Testing procedures	(patient) did not take Medicine therefore he think become dementia by it.
r two times a		etwa gesponnt
ct were found.	The first check-up given is Head-CT. When cortical atrophy is found, MRI and MRA are given	wovtkarg .But (He)effort to tell spiritual experience. zuganglich.
of the ability to	to observe the morphologic characteristics and cerebrovascular features.	(He said) he saw himself as the man in the novel of Dostevsky.
man at majority	How does one explain that cortical atrophy is a physiological abnormality caused by	, , , , , , , , , , , , , , , , , , ,
	hyperplasia of brain, peculiarity of the vascularity (e.g. cerebrovascular course is different from	Schizotypal Personality.
urosis, stopped	average, and there is asymmetry of right and left), also there is a lack of Willis cords. This	comzetypart ereenanty.
ess and its long	process is based on the hypothesis in which most healthy adults have space between the frontal	The patient said that he resembled Dostoevsky's hero. The patient has the distinction of himself
as not believed	cortex and a covering bone after Head-CT have a difference of cerebral vascular course in	
the patient was	normal variation. This is uncertain.	and Dostoevsky's hero .
	By means of sequential electroencephalograms, it can be ascertained whether brain waves	This is not idea of reference. In order to judge isolation as mental pathology, the doctor has to
nis bicycle. The	were in the first and second stage of sleep were occurring during arousal or not.	observe about the relation between the social group and the patient carefully.
en the hospital	By means of PET, one could examine whether CMRGIu (Cerebral Metabolic Rate	This is not a symptom of mental illness.
	of Glucose) and CMRO2 (Cerebral Metabolic Rate of Oxygen) had decreased or not.	
e in the front of		Nov-14
this type of this	O The diagnostic standard of antinevaluation induced an each clarathy	In school he is restless in class.
	9. The diagnostic standard of antipsychotic -induced encephalopathy	Other students are passive, "belong to the Establishment".
, after stopping	Antipsychotic-induced encephalopathy patients should be applicable to:	"I don't want to be like them. I think only a way living that I live in loneliness."
orain), epilepsy,		"I do not want to make friends. I gave up it."
g according to	1 Patient has a course of antipsychotics for a long period, and the prodrome of neuroleptic	"I was struck name off the list in the tennis club."
blam was being	malignant syndrome or extrapyramidal symptoms were marked during the term.	"Other students dislike me because I am not same as them. So they persecute
2	2 Brain exhaustion (Patients in the chronic stage feel mental fatigue accompanied by heavy-	me."
disorder This	Leadedeese and connect continue work often a short time)	

Orgueil

Ausgelassen Stellungnahme.

However clinical examination is difficult Antipsychotic-induced encephalopathy or schizophrenia, that is the question. If a person does not look at this jar, he look at two shadow faces which does not exist here If the doctors does not know about antipsychotic-induced encephalopathy, they will find schizophrenia, which does not exist, and patients will die.

NOTE-About new words

This presentation includes some new words. New disease idea, new symptom and new right. These words contained in abstract. 1. antipsychotic-induced encephalopathy I expressed this new disease idea "Antipsychotic-induced Encephalopathy" 2. "brain exhastion" I named "brain exhastion" about the most specific symptom Caused by Antipsychotic-induced Encephalopathy 3. I expressed the the feeling of brain exhaustion patients "mental fatigue" I worry this word "mental fatigue" easy to misunderstand as "mental problem". The patients say "The fatigue on brain". 4. I thought "mental effort" about task brain, ill-use brain, drive brain. 5.1 expressed "the right to self-diagnosis" This is the right which the patients diagnose themselves.

26. References:

Hayama S (2002): Encephalopathy by Antipsychotic, Malpractice and View of schizophrenia. 12th WCP Yokohama (available at http://www5e.biglobe.ne.jp/~hayama/) 1. Gedve A (1998): Neuroleptic-Induced Dementia Documented in Four Adults With Mental *mimself* Retardation. Mental Retardation Vol.36 No.3 182-186 2. Shibuya M (2003): An autopsy case of untreated giant cell glioblastoma has to 44th Annual Meeting of Neuropathology Neuropathology. 3. Matsushita M et al(1975): Some dead cases seemed because of antipsychotics encephalopathy. Advanced in Neurological Science Vol 19 556-567 4. Iwabuchi K et al(1989): Two autopsied cases of neuroleptic neuroleptic malignant syndrome with the irreversible brain damage and myogenic muscular atrophy. Advanced in Neurological Science Vol 33 No 4 674-684 5. Imaoka K et al(1982): Abnormal Distribution of Corpora Amylacea in an Autopsy Case of Tardive Dyskinesia. Psychiatry (Japanese Journal) Vol.24 No.6 658-661 6. Behl C et al(1995): Haloperidol-induced cell death -mechanism and protection with vitamin E in vitro Neuroreport 29;7(1):360-4 7. Hyman SE, Nestler EJ (1993): The Molecular Foundations of Psychiatry: American Psychiatric Press 8. Lader MH (1977): Psychiatry on Trial : Penguin Books