

# A Case Report of a Chronic Schizophrenia Treated with Combined Treatment of Korean and Western Medicine

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**Objectives:** Schizophrenia is difficult to treat effectively and the antipsychotics used have many side effects. However, few studies have focused on the combined treatment of Korean and Western medicine as an alternative. In this study, we reported an inpatient with chronic schizophrenia who was treated by a combination of Korean and Western medicine.

**Methods:** We experienced a case of a diagnosed schizophrenia patient as whose chief complaint was avolition, diminished emotional expression and hallucination. The patient was treated with Western medicine and Korean traditional treatment including acupuncture, moxa and herbal medicine. The Brief Psychiatric Rating Scale (BPRS) and the Positive and Negative Syndrome Scale (PANSS) were used for assessment.

**Results:** After treatment, symptoms involving avolition, diminished emotional expression and hallucination were improved; furthermore, the scores of the BPRS and the PANSS were decreased by approximately 50%, respectively. In addition, there were no notable side effects.

**Conclusions:** The combined treatment of Korean and Western medicine can be an effective and well-tolerated treatment modality for patients with chronic schizophrenia.

**Key Words:** Chronic Schizophrenia, Combined treatment of Western and Korean medicine, Herbal medicine, Acupuncture.

## I. INTRODUCTION

About 1% of people around the world suffer from schizophrenia which usually attacks people in teens or early twenties and becomes chronic. It does not only make patients to have difficulties in personal living but also impose the burden of support to the families of patients and the society<sup>1)</sup>. The number of patients treated with the code "F20", which means schizophrenia, had constantly increased from 2012 to 2014<sup>2)</sup>.

According to the 5th version of Diagnostic and Statistical Manual of Mental Disorders, at least two or more of the following symptoms are necessary to diagnose schizophrenia and each symptom has to present for a significant portion of time during a one month period: Delusions, hallucinations, disorganized speech, grossly disorganized, catatonic behavior, or negative symptoms. Moreover continuous signs of the disturbance persist for at least six months. This six month period must include at least one month of symptoms<sup>3)</sup>.

Although antipsychotic drugs are the mainstay of treatment nowadays, they are associated with serious adverse effects such as tardive dyskinesia and tremor. Also about 20% of people do not respond adequately to treatment<sup>4)</sup>. So there are some increasing attentions about Korean traditional treatment on schizophrenia for alternative.

In previous studies carried out in Korea, Ha<sup>5)</sup> reported a case study of combination therapy of psychosocial treatment and oriental medical treatment on schizophrenia and Lee<sup>6)</sup> reported a case study of a schizophreniform disorder treated by oriental medical treatment and emotional freedom techniques. But the domestic studies on schizophrenia are not as active as the international studies. Furthermore, there are only a small number of studies available on the combined treatment of Korean and Western medicine.

With this background, the author reports a case study of application of the combined treatment of

Korean and Western medicine on schizophrenia.

## II. CASE

### 1. Patient: Male/20 years old

### 2. Chief complaints

- 1) Avolition, diminished emotional expression and hallucination
- 2) Hallucination

### 3. Onset of symptoms

July 15, 2015 (12 days before admission)

### 4. Past medical history

- 1) Rhabdomyolysis: diagnosed in 2012
- 2) Complex regional pain syndrome: diagnosed in 2013
- 3) Allergic rhinitis: diagnosed in 2000

### 5. Family history

None

### 6. Current medication

- 1) Olanzapine 10 mg 1T#1 (antipsychotic)
- 2) Sertraline hydrochloride 111.9 mg 1T#1 (antidepressant)
- 3) Milnacipran hydrochloride 50 mg 1T#2 (antidepressant)

### 7. Current medical history

This 20-year-old male patient experienced his first hallucination episode when he was 17 years old. After then he was diagnosed as schizophrenia and started to antipsychotic drugs. His symptoms worsened after he lost his puppy in July 15th, 2015. He increased the quantity of medication but his symptoms including hallucination and negative symptoms did not improve. He lied on the bed all the time so he visited our

hospital.

## 8. Social history

He lives with his parents and one younger sister. He has smooth relations with the family members. However, he believes that he is not perfectly understood. He did not want to go to school because he had been bullied by classmates since he was a freshman in elementary school. He wanted to get along with the classmates so he tried again and again. Finally, he invited all his classmates to his birthday party when he was senior. But after that their bullying never ended. He also had hard time in middle school. At this time he decided to take revenge on those who had bullied him. After he started high school, his classmates bullied him, so he transfer to a new school. The bullying seemed to decrease. When he was 17 years old, he was diagnosed as rhabdomyolysis and had operation. Due to the side effects of the operation he suffered with complex regional pain syndrome and he dropped out of the school. Nowadays he usually says 'I want to make my classmates be burnt at the stake.', and 'I want to kill them.'. He also believes that someone has put a curses on his life.

## 9. Early examination findings

- 1) Appearance: 175 cm/115 kg. Abdomen area is developed and the facial complexion is a little bit red.
- 2) Smoking history: None
- 3) Drinking history: None
- 4) Appetite and digestion: Fine
- 5) Frequency of defecation and stool form: 1 time/day, normal form
- 6) Frequency of urination: 5~6 times/day, feel comfortable with urination
- 7) Sleep: Fine
- 8) Pulse diagnosis: Active and rapid (滑數)
- 9) Tongue diagnosis: Pink tongue with white coating (淡紅 白苔)

10) Vital sign: Blood pressure of 120/80 mmHg, pulse 98 times/minute, respiration rate 20 times/minute, body temperature of 36.4°C

11) Electrocardiography: Sinus tachycardia

## 10. Diagnose

Schizophrenia

## 11. Korean medicine diagnose

Phlegm-heat (痰熱), Deficiency of qi (氣虛)

## 12. Duration of treatment

From July 27, 2015 to September 24, 2015 (for 60 days)

## 13. Treatment

### 1) Herb medicine

(1) From July 27, 2015 to August 17, 2015 (for 22 days): Chungseoikgi-tang (清暑益氣湯)

(2) From August 18, 2015 to September 9, 2015 (for 23 days): Chungpesagan-tang (清肺瀉肝湯)

(3) From September 10, 2015 to September 24, 2015 (for 15 days): Bohyulahnsin-tang (補血安神湯)

It was prescribed to be taken three times a day.

### 2) Acupuncture

Acupuncture (0.20×30 mm disposable acu needle; Dong Bang Acupuncture Factory) was administered once a day. Needle retention time was set at 15 min, and acupuncture was performed using a plunger on Baekoe (百會) (GV20), Hapkkok (合谷) (LI04), Gokjji (曲池) (LI11), Uhjae (魚際) (LU10) and Sinmun (神門) (HT07).

### 3) Moxa

Indirect Moxa (間接灸, Sun Moxa Factory) was applied on a plunger including Gwanwon (關元) (CV04) and Chunchu (天樞) (ST25) for 30 minutes once a day.

14. Assessment tools

1) Brief Psychiatric Rating Scale (BPRS)<sup>7)</sup>

It is the most frequently used scale to rate the symptoms of schizophrenia. The BPRS consists of 18 items and we can mark from 0 (none) to 6 (very severe) according to the severity of the symptoms.

2) Positive and Negative Syndrome Scale (PANSS)<sup>7)</sup>

It is the most frequently used scale to rate the symptoms of schizophrenia with the BPRS. It was developed to overcome certain limitations of the BPRS such as insufficient covering of negative symptoms and a lack of clear anchors for the individual items. It is divided into three parts including positive subscale, negative subscale, and general psychopathology subscale.

15. Catamnesis (clinical course and outcome)

The following paragraphs show the progress of the inpatient (Table 1, 2).

The BPRS and the PANSS were evaluated according to the change of herb medicine.

1) Admission 1st day

We talked with his parents to investigate the symptoms and present illness because he could not stare at other people and concentrate on conversation. He spent most of the time on the bed without change of

facial expressions.

2) Admission 2nd~10th day

He seemed to adapt himself to new environment day by day. He spoke more words and showed more activities. But most of conversation was directed toward a story of his missing dog and the flow of conversation was incoherent. He sometimes talked about suicide. He suffered hallucinations three times in this period which lasted from 30 minutes to an hour.

3) Admission 11th~22nd day

His appearance became more natural. Also he was willing to be treated and he actively took a walk, read a book and did some exercise like riding a bicycle. But the flow of thought and conversation was illogical. He could not be able to concentrate on something for a long time. In this period, he lost his weight about 7 kg. As a result triglycerides (TG) decreased to 210 mg/dl in the blood test performed on 22nd day. Though aspartate aminotransferase (AST) and alanine aminotransferase (ALT) slightly increased, it was not

Table 2. The Result of Blood Test

Blood Test	After 1 day	After 22 days	After 38 days
AST	52	64	47
ALT	128	139	114
TG	430	210	291
HDL-Cholesterol	22	33	31
WBC	6.9	6.2	6.2

\*Reference: AST 0~40 U/L. ALT 0~40 U/L. TG 50~150 mg/dl. High Density Lipoprotein (HDL)-Cholesterol 30~80 mg/dl. White Blood Cell (WBC) 4~10.8 10<sup>3</sup> /μl.

Table 1. The Change of Evaluation Score

Evaluation tool	Score				
	After 1 day	After 23 days	After 45 days	After 60 days	
BPRS	58	40	25	23	
PANSS	Positive Subscale	22	16	15	14
	Negative Subscale	41	24	14	14
	General Psychopathology Subscale	58	43	35	33
	Total PANSS	121	83	64	61

remarkable. Hallucinations occurred twice and disappeared in 30 minutes.

#### 4) Admission 23rd~33rd day

Although he seemed to be depressed talking about his missing dog, he showed increasing emotional change and detailed expression. He said that it was still hard to express his thought logically. Hallucinations occurred twice and disappeared within 30 minutes.

#### 5) Admission 34th~45th day

He actively wanted to be treated. The contents of conversation had been abundant day by day. The negative symptoms almost seemed to disappear. Hallucinations occurred once and disappeared within 15 minutes. The figures of AST and ALT performed on the 38th day after admission were slightly decreased.

#### 6) Admission 46th~60th day

He cheerfully talked about things that he wanted to do after discharge. Hallucinations did not occur in this period.

### III. DISCUSSION

The mainstay of treatment for schizophrenia is antipsychotic drugs, also called neuroleptic drugs. They are divided into typical and atypical antipsychotics. The typical antipsychotics such as chlorpromazine, haloperidol and prochlorperazine block dopamine receptors to reduce hallucinations and delusions<sup>8</sup>. But they are not effective on the negative symptoms such as a decline of concentration and damage of cognition. Besides they have high potential for extrapyramidal effects such as dystonia, akathisia and dyskinesia<sup>8,9</sup>. On the other hand the atypical antipsychotics such as clozapine, olanzapine and risperidone have effects on negative symptoms and low potential for extrapyramidal effects. But they have side effects, for example

weight gain, doziness, rise of liver function figures and dizziness<sup>8,9</sup>. Though taking these antipsychotics partially improves the symptoms, they are not therapeutic agents which can not allow fundamental problems of thoughts<sup>8</sup>. So recent researches about the effectiveness of Korean medicine on the schizophrenia have been actively studied and they shows that the Korean medicine has fewer side effects and dropouts<sup>4</sup>. But for now, it is hard to say that Korean medicine is a certain effective therapy on schizophrenia.

Schizophrenia falls under the category of maniac (癲狂) in Korean medicine. The maniac (癲狂) is a disease caused by abnormality of phlegm-fluid (痰飲), fire (火), blood (血) and so on. They cause confusion, scattering and exhaustion of spirit (神) and eventually mental and physical disabilities appear. *Jeon* (癲) means more negative and depressed emotional symptoms than *kwang* (狂) which means more positive and active physical symptoms<sup>10</sup>.

This 20-year-old male patient has suffered from hallucinations and delusions since he was 17 years old. He has taken antipsychotics since then and managed to maintain social life. But after he lost his dog, his symptoms became more severe. He wanted to lie on the bed all day without any emotional expression. He had schizophrenia symptoms like hallucinations and negative symptoms. The duration also has persisted for six months and he could not maintain his daily life. These facts satisfied criteria for schizophrenia on DSM-V. So we diagnosed him with maniac (癲狂) which corresponded to schizophrenia, particularly as *jeon* (癲) and treated him with the combination of Korean and Western medicine.

The causes of *jeon* (癲) can be categorized as congenital disease (胎病), phlegm (痰), phlegm-fire (痰熱), seven emotions (七情), heart blood deficiency (心血不足), weak and cold digestion organs (脾胃之虛寒) and powerful heart-fire (心火亢盛)<sup>10</sup>. This patient had sturdy build, thick skin, red cheeks and developed belly.

He liked to drink cold water and sweated profusely when he moved. His pulse was active and rapid (滑數). So we thought the stress made powerful heart-fire (心火亢盛) more active and it evoked phlegm-fire (痰熱). Phlegm-fire (痰熱) caused him to suffer from hallucination and be exhausted (氣虛). So we treated him with Chungseoikgi-tang (清暑益氣湯), Chungpesagan-tang (清肺瀉肝湯) and Bohyulahnsin-tang (補血安神湯) to reduce phlegm-fire (痰熱) and raise qi (氣).

Chungseoikgi-tang (清暑益氣湯) was used during the at first period (1st~22nd day). It is originated in 『Dongwon's Digestion Theory (東垣脾胃論)』. It is the combination medicine of Bojoonikki-tang (補中益氣湯) and Sangmaek-san (生脈散) and treats heat sensation of body (身熱), dry mouth (口渴), sweat (自汗) and heart choking sensation (心煩) that are caused by damp-fire (濕熱)<sup>11</sup>. We used it to reduce heat symptoms caused by phlegm-fire (痰熱) and raise qi (氣).

As a result his self movement increased and lost his weight about 7 kg. On the blood test performed on the 22nd day, triglycerides (TG) decreased to 210 mg/dl. The score of the BPRS and PANSS decreased from 58 to 40 and from 121 to 83 respectively. In particular the negative subscale of the PANSS notably decreased from 41 to 24.

We used Chungpesagan-tang (清肺瀉肝湯) during the second period (23rd~45th day) which is originated in 『East Medicine Soosebowon (東醫壽世保元)』. It has been used when tae-um people (太陰人) have dry and hot liver (肝燥熱證)<sup>12</sup>. A liver is considered as a commander that can decide and supervise the emotions in Korean medicine<sup>13</sup>. This patient had developed belly, had red cheeks and looked carefree. We diagnosed him as tae-um people (太陰人). So we used Chungpesagan-tang (清肺瀉肝湯) to control liver function and help recovery of mental function.

His symptoms which were related to heat like dry mouth and red cheeks decreased in this period. He expressed his emotions more widely and was willing to

be treated. His negative symptoms were hardly observed. Hallucinations happened three times during this period and disappeared in 30 minutes. The score of the BPRS also decreased from 40 to 25 and the score of PANSS was decreased from 83 to 64. The figures of AST and ALT decreased compared with the figures on the at 22nd day.

We used Bohyulahnsin-tang (補血安神湯) in the third period (46th~60th day) which was made by Kim<sup>14</sup>. It has a basis on Samul-tang (四物湯) which has an effect on blood deficiency (血虛) and it is effective on protecting heart (補心) and making the heart and the soul stable (寧心安神)<sup>14</sup>. Lee<sup>15</sup> found it had an anti-stress effect. We used it not only to reduce and adjust his stress but also to make his soul stable.

In this period, his ability of adjustment to reality increased and he planned for the future when he discharged from hospital. There were no hallucinations. The scores of the BPRS and the PANSS were 23 and 61 respectively. It is notable that they decreased by about 50% compared to the scores marked at the admission.

We chose Baekoe (百會) (GV20), Hapkkok (合谷) (LI04), Gokjji (曲池) (LI11), Uhjae (魚際) (LU10) and Sinmun (神門) (HT07) as acupuncture points. And moxa treatment was done on Gwanwon (關元) (CV04) and Chunchu (天樞) (ST25). These points are selected to relax the body (安身), protect the heart (補心), reduce a fever (清熱) and make the heart and the soul stable (寧心安神)<sup>16</sup>.

There has been some studies about side effects caused by the combination treatment of Korean herb medicine and Western biomedical medicine<sup>17</sup>. In this case, there were no notable side effects. In particular, liver function figures like AST and ALT slightly lowered after treatment.

We treated the patient, who suffered from chronic schizophrenia, with the combined treatment of Korean and Western medicine and had some effective results.

This report has limitations that the findings are based on only one case. It is too limited to show the effectiveness of the combined treatment of Korean and Western medicine. And it should use more objective assessment tools. Most assessments heavily relied on the patient's statements. But considering that the studies about schizophrenia treated with Western medicine and social support are widespread, this study has its meaning in that it shows a potential of the combined treatment. Although more studies are needed, the combined treatment of Korean and Western can help patients with schizophrenia who are suffering from the side effects of antipsychotics or do not responding to antipsychotics. Furthermore professionals should study comprehensive and up-to-date clinical information about potential benefits and risks of the combined treatment to the schizophrenia patients.

#### IV. RESULTS

The following results were observed in this case after applying the combination of Korean and Western medicine for chronic schizophrenia.

1. The combination of Korean and Western medicine has a potential to be efficiently used to treat chronic schizophrenia.

2. The combination of Korean and Western medicine is well-tolerance and has no notable side effects in this case.

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