

## ■ Research Report

# A case of remission of childhood-onset fluency by paroxetine

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**Abstract;** We experienced a case in which Paroxetine responded to childhood-onset fluency. The case had dysarthria, although mild, since childhood. The case developed interpersonal tension shortly before the end of high school. Having been nervous about interpersonal tensions, he has prescribed relatively large amounts of benzodiazepines since visiting our hospital. By accident, benzodiazepine anxiolytics responded to childhood-onset fluency disorder.

It is possible that there are potentially many cases in which benzodiazepines show strong efficacy in childhood-onset fluency, as in this case.

Paroxetine ameliorated childhood-onset fluency, but there are likely to be many cases in which childhood-onset fluency was ameliorated by SSRIs.

### **key words:**

childhood-onset fluency disorder, benzodiazepine derivatives, selective serotonin reuptake inhibitors, partial epilepsy

## **I . Introduction**

Childhood-onset fluency has been actively studied as a serious disease in Europe and the United States. It has been considered a hereditary disease due to its high familial accumulation. Childhood-onset fluency begins between the ages of three and six and is observed in 5% of early childhood and 1% of adults. The fact that there are many cases of

remission before becoming an adult suggests that it may be similar to partial epilepsy. After childhood, men are four times as many as women. When the parent has childhood-onset fluency, the child is three times more likely to have childhood-onset fluency compared to the normal mean<sup>12</sup>).

Fluency may occur in adults due to cerebral infarction or extremely severe head bruising<sup>13</sup>).

Currently, the search for loci for childhood-onset fluency is progressing rapidly from studies of multiple cases in the family. Many loci for childhood-onset fluency have been found, and childhood-onset fluency is a syndrome caused by a number of factors<sup>12</sup>).

Acupuncture / stellate ganglion block therapy was effective for childhood-onset fluency. This suggests that the childhood-onset fluency in the case is sympathetic hypertonia. These examples are considered to be included with considerable probability.

## **II . Cases**

(Case) 46 years old, male, right-handed (father, mother and sister are also right-handed)

(Family history) There is no childhood-onset fluency and epilepsy in siblings and relatives.

During his high school days, his father was taken to a psychiatrist at a university hospital by a very strict grandfather to play without going to school, and was diagnosed with a personality disorder (no medication). However, my father is also extremely stiff and likely to have had autism spectrum disorder. The father was harsh to the mother, but very gentle to the child, and the case has never been angered by him.

My father had a morbid heat like the case. My dad also sprinted fast.

(Personality) Strong stiffness, nervousness, gentle, honest, friendly, hard worker.

(History) Nothing to note

(Current medical history / life history) He is a 25-year-old father and 25-year-old mother. There are no special matters to be noted during the perinatal period. Parents and relatives have never said about epilepsy in infancy and childhood, such as febrile seizures.

It is possible that my father did not work hard at gambling and the mother worked alone to cover the household budget, and that the stress caused by this family discord was being applied to the case.

Until I was in kindergarten, I was a very weeping baby, sometimes crying for several hours every day without any reason, especially in the evening. Also, when I was in kindergarten, I was dropped off from the kindergarten bus and couldn't walk the very short distance from the bus stop to my house, so I always cried at the bus stop. The kindergarten has only been going to kindergarten for one year, but the case has been so disliked that rubella has been prolonged. When she was in kindergarten, she was talked to by a girl but couldn't speak and seemed to be ridiculed for fluency.

Growth was fast, and when I entered elementary school, I was the second tallest in the class.

When I become an elementary school student, I stop crying at all, and run from home to school (about 15 minutes for a first grader) and go to school. I was not good at interpersonal relationships. Until the first year of elementary school, there were no close friends. In the second grade of elementary school, parents made friends with classmates, and after school, they started to play together almost every day. The friend had a very mild personality.

Since elementary school, there were some articulation disorders such as "ki" and "chi" could not be distinguished. He says that it is still going on, but he didn't know how to pronounce "Earth", for example. The case is still poorly pronounced, and he is not very good at telephones.

In the lower grades of elementary school, the habit of giving "one" at the beginning of classes was continued, and teachers often pointed out that, but it was not easily improved, and it was improved in the fourth grade of elementary school Remember the following. Apparently it was easier to say if "Ane" was added first.

I have never been bullied because of the countryside or the excellent math (mathematics).

In the lower grades of elementary school, "the chopsticks stopped for a few minutes to enough time as a bonny during dinner", "that the sense of reality became thin in the evening and the head became dim" often occurred. These seizures finally ceased in their fourth or fifth grade.

During exercise, I couldn't release my power skillfully, so I was not good at exercise. In his third year of elementary school, he was ridiculed for his

awkward running style and was given a nickname from "Dochinbattan" and his running style.

I haven't trained anything, but I know I can do bicep in my upper arm muscles in the third grade of elementary school. It is thought that bicep was noticeable due to very low body fat.

Surprising reactions were much stronger than ordinary people<sup>16</sup>). The head circumference was large. I was afraid to go to the bathroom at night when I was in elementary school. Desperate god fears were more pronounced than in elementary school.

<sup>4</sup>In the fourth grade of elementary school, you notice that your abdominal muscles are very strong, and that it is safe to hit your abdomen. He also notices that he can hardly do abs workouts that anyone can do.

<sup>4</sup>In the 4th and 5th grades of elementary school, my face became severely distorted when I ran and became funny.

Growth is fast, and height growth is almost finished in the first year of junior high school, and in the first year of junior high school, 50m running became the fastest in the school year. The sprint was fast, but the long run was not good.

In junior high school, I was ridiculed by my close friend several times for recurrent fluency, but I was a close friend and didn't mind much. In the second year of junior high school, sleep paralysis occasionally occurred.

In the first year of high school, you notice that the first word does not appear. It is presumed that the voluntary nature has changed to a difficulty. This makes them very suffering from fluency disorders. In September, during the Japanese language class, the first first word did not appear, so I frequently left early before the Japanese language class and repeatedly refused to attend school.

In high school, learn that fluent disorders become severe when stress builds up.

The science and mathematics system was extremely good, but the English was very poor. I did not study science and mathematics at all, only English, but English always scored the worst. The language was also bad. The case considered that the language system was inherently weak. It was a hot topic since middle school when English pronunciation was funny. When I was in high school, I was often told that I couldn't understand the sarcasm and the hate.

It seems that there was also in the first half of college and junior high school, but there were many things that were noticed and pointed out that the mouth was distorted for some reason, especially in high school. In addition, although the case was merely conscious of the emphasis on the face, it was often pointed out that she had a funny expression, especially in high school.

At the end of the third year of high school, social tensions developed. At the time of the second exam, I was nervously nervous and fell to T University, which was my aspiring school. Preparatory school quits in two months and returns to home due to interpersonal tension. And he went home. After a long run, he lost his aspirations and enrolled in the local former Imperial University.

In college, I was assigned to read English during my English lessons, and because of fluency in English I could only read it steadily and felt embarrassing.

In addition, it was very difficult to attend classes where people were crowded because of interpersonal tensions during college, and repeated years.

I could hardly make friends during college when I was nervous.

In the latter half of my college days, I learned from the Internet that acupuncture and stellate ganglion block worked for fluency disorders and received them. In particular, stellate ganglion block had very strong effects on fluency and interpersonal tension.

4th year in college, more than a year later, leaving school for another year, a motorcycle accident involving a frontal collision with an oncoming car, resulting in a skull fracture and hospitalization for 2 months (amnesia after injury is four and a half days). At this time, a head MRI was performed, but nothing to note.

After this accident, I was worried about interpersonal tension and visited the main hospital. The author becomes the attending physician and begins to administer benzodiazepines. Prescriptions of cloxazolam, flurazepam, lorazepam, clorazepate, flunitrazepam, flutoprazepam, ethyl lofrazepate, clonazepam, alprazolam, etc. were given. alprazolam is presumed to have anticholinergic effects, but when taken, fluency worsened significantly<sup>8</sup>). The effects of ethyl lofrazepate and clonazepam were weak or hardly noticeable.

Although amitriptyline was prescribed, taking one tablet keeps asleep for 24 hours, and fluency disorder becomes severe and severe for about three days, and one dose is taken.

As a result of various explorations, we settled the prescription of bromazepam 20mg / day, diazepam 15mg / day, etizolam 3mg / day, flunitrazepam 2mg / day.

Benzodiazepines have a dramatic effect on fluency, but interpersonal tension is not sufficient, but interpersonal tension is a problem.

After graduating from college, you find a job as a programmer who studied on your own during college. The programmer thought he could do it alone at home, but the case was discouraged that he had to do it at work. I was a programmer, so I didn't talk much, but there was interpersonal tension. He had to take large doses of benzodiazepines to reduce interpersonal tension. He was not taking benzodiazepines on his days off. Also, it was a round trip between the company and the apartment. She was enthusiastic about making software on her own, irrespective of her work at the company on the day off, which can be said to be the reason for her autistic life.

(4) The patient had used the benzodiazepine drug by dissolving it in the oropharynx just before talking on the phone. The case argued that absorption from the oropharyngeal mucosa would go directly to the brain without passing through the liver and would be fast and effective.

The case gets very hot for about 40 minutes when the sympathetic nerve is stimulated, that is, when you arrive at the office, eat lunch, or take a bath. He went to a hospital suspected of pheochromocytoma and performed a blood test. He was told, "Dopamine and others are not elevated at all, the sympathetic nerve is considered very sensitive, and it is not a pheochromocytoma." I remember that this morbid heat was not so much remembered when I was in elementary school, and became more pronounced than in junior high school or high school.

At the age of 32, she suffered from influenza and took 10 tablets of loxoprofen sodium, but the fever did not decrease at all, and she took 4 tablets of diclofenac sodium. The heat dropped enough and it became easier. However, after 2 hours, the fever rises again and makes it harder. Taking 4 tablets of diclofenac sodium again softens and eases the heat, but it is not enough. . Thus, the case was very proud of the drug. (The flu this year was a very strong flu.)

At the age of 32, he took about 6 bags of cold medicine before going to work, and thought he was extremely resistant to medicine, and went to work. When I was having lunch at work that day, I had an episode that I had a meal plate in front of my head and left it alone for about 10 minutes. The case was unbelievable at a later date if asked, and I asked several people, who agreed that it did. The president of the company gave me a medical examination to confirm that this was the aftereffect of a traffic accident in college, but there was nothing special to note about head MRI, brain waves, intelligence, etc. Was. The case's ability as a programmer was extremely high, especially from the president.

risperidone and olanzapine were prescribed to argue that they were effective for interpersonal tension, but they were not effective for interpersonal tension and fluency because of side effects alone. On the day of work at the company, he took risperidone 1mg and had severe general malaise. He lay down on the sofa for about 2 hours and returned. It is said that the dose was too much because of general malaise and drowsiness, but seizures occurred while taking olanzapine and driving a car. He suddenly lost consciousness while driving a car with a one-year-old child in the passenger seat, and the car seemed to have stopped at the side of the road and slept. The case was an enthusiastic fan of F1 and even played F1 racing videos as background music at work. Thirteen years have passed since television wasn't watching except F1. He was so fond of manual transmissions that he had a manual transmission, and he might have gone unknowingly into neutral as he had a seizure. However, there was a sign, and it was thought that it was most likely that the driver stopped the car at the side of the road and suffered amnesia due to a seizure and had no memory of the sign.

It seems that the car was not damaged or damaged. There were no traffic offenses. I thought later that a police officer had come where the child was crying in the baby chair.

It seems that the police officer sent you to a brain surgery hospital. I have no memory of the case until it was transported to a brain surgery hospital. He had recovered his consciousness when he arrived at the hospital, but his consciousness was faint, and a head MRI was taken at the hospital. Events in the hospital have partial memories.

It is the same as an episode during lunch because there is no memory of the precursor.

I want to heal interpersonal tension in the case. I want to heal it. I know that SSRIs are effective for interpersonal tension. I strongly hope to prescribe SSRIs. Various SSRIs, including paroxetine 2,11) and sertraline6) were prescribed, but had no effect on interpersonal tension. However, he finds that fluency has remitted during this time. The case did not suffer from fluency and did not know which drug led to remission in fluency. The patient was very worried about interpersonal tension, and fluency was hardly affected by the effects of benzodiazepines, and he was hardly pleased with the remission of fluency.

The case itself, "I can't read the atmosphere of the place, I don't understand the mind of the person, I'm sick of morbidity, I'm clumsy in hand and body movements, I'm clumsy in interpersonal relationships, I'm talking in the eyes of people I can't "and claim that it's a typical Autism Spectrum Disorder (I think it's definitely Autism Spectrum Disorder).

### **III . Discussion**

Since the case was Autism Spectrum Disorder, stress tolerance was low, anxiety disorder since childhood, muscle tension was abnormally strong, and symptoms such as dysarthria, inability to perform abdominal muscle exercise, awkward running, etc. appeared. It is also speculated. However, in the childhood of the case, the family was extremely poor, the family was extremely inconsistent, and the father and mother were fighting every day, and the abdominal muscles and the like may have been stiff due to the stress.

Cases are still indistinguishable from "ki" and "chi," and you do not know when you type "earth" on the keyboard.

Because the case has some type of epilepsy, benzodiazepines may be effective in fluency disorders. However, benzodiazepines release strong muscle tone due to anxiety disorders, and the mechanism of successful fluency disorders may be considered.

No literature was found suggesting a relationship between epilepsy and fluency disorders. However, there is a paper<sup>14)</sup> describing that levetiracetam, an antiepileptic drug, is effective in cases of concurrent fluency and partial epilepsy, but it is possible that this case may be applicable.

In the United States, brain surgery is performed for fluency disorders. Organic and functional disorders of the basal ganglia are considered to be the root of fluency disorders 7).

Recently, vagus nerve stimulation therapy is frequently used because epileptic seizures are less likely to occur due to vagus nerve stimulation<sup>15</sup>). Acupuncture, stellate ganglion block and benzodiazepines may be successful in fluency disorders in patients, possibly due to this mechanism.

Due to their dependence, benzodiazepines are generally treated like paradrugs in Europe and the United States and may be arrested for possessing them without a prescription. In Europe and the United States, studies on fluency have been very active in the past, but the lack of a paper showing the efficacy of benzodiazepines on fluency may be the reason for this.

Alprazolam and clonazepam are frequently prescribed in Europe and the United States, although they are benzodiazepines. However, alprazolam has an anticholinergic effect, and as far as the author knows, many children with childhood-onset fluency have severe fluency disorders as in cases<sup>8</sup>). In some cases, clonazepam was taken, but the effect was not felt. In the United States and Europe, alprazolam is most frequently used as a benzodiazepine if its dependence is low, and it is considered that benzodiazepines are considered to increase fluency disorders.

Clonazepam, an antiepileptic drug, is a benzodiazepine drug that has been used for a long time, and is prescribed relatively frequently in Europe and the United States. However, no report showing efficacy for fluency disorders has been found. He also said that clonazepam had no effect on stuttering.

Clobazam, another antiepileptic drug, is a benzodiazepine drug that has been marketed relatively recently, but there is no report showing efficacy for fluency disorders.

Are there few or many benzodiazepines that have dramatic effects on fluency as in cases, and besides alprazolam and clonazepam, where benzodiazepines are close to para-narcotics and less dependent in Europe and the United States Is rarely prescribed. It is also believed that benzodiazepines are thought to exacerbate fluency disorders, especially because of alprazolam, which temporarily exacerbates fluency temporarily, due to its anticholinergic effects.

There have been reports that fluoxetine 9), paroxetine 2,4,11) and sertraline 3,6), which are SSRIs, have reduced fluency. However, there are papers<sup>5,10)</sup> that sertraline causes fluency disorders. He said that he had no idea which drug worked when he was taking several SSRIs, but his flu was in remission.

COI: There is no COI to disclose.

## Literature

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