

Compulsive water drinking: A case report

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Abstract

In this article, it is aimed to present a 39-year-old woman with obsessive-compulsive disorder with excessive water drinking due to compulsions. This clinical condition; called as "compulsive water drinking", "psychogenic polydipsia" and "water intoxication". Psychogenic polydipsia which is characterized by excessive sensation of thirst and compulsive water drinking has been reported in 6-20% of patients in psychiatry clinics and most commonly seen (80%) in patients with diagnosis of schizophrenia. It can also be seen in patients with diagnosis of mental retardation, bipolar disorder, alcohol dependence, eating disorders and organic mental disorder. Cognitive behavioral therapy, drug therapies such as serotonin reuptake inhibitors, atypical antipsychotics and propranolol are the main treatment modalities.

Keywords: Compulsive; Psychogenic; Polydipsia.

INTRODUCTION

Psychogenic polydipsia is a clinical picture of 6-20 % of psychiatric patients characterized by excessive sensation of thirst and compulsive drinking. This clinical manifestation has also been named as self-initiated water intoxication (SIWI), primer polydipsia, hyponatremia-polydipsia syndrome due to psychosis, potomania and chronic water abuse (1).

The vast majority of psychogenic polydipsia patients are able to drain water they consume, but only one third of the patients, develop water intoxication (2). Appearance of water intoxication mainly goes with headache, blurred vision, weakness, tremor and cramps, gastric dilatation, nausea, vomiting, diarrhea, diuresis, enuresis, increased salivation, confusion, lethargy, coma and death. Death is caused by lung and brain edema (3).

Increased intake of water can lead to complications such as congestive heart failure, hydronephrosis, bladder dilatation, chronic renal failure other than acute water intoxication in the long term (4). This clinical condition is most frequently reported among psychiatric patients (80%) with diagnosis of schizophrenia (5). It can be also seen in patients with diagnosis of mental retardation, bipolar disorder, alcohol dependence, eating disorders, and organic mental disorder (1,2,5).

We reported this case with the purpose of drawing attention to the clinical risks of excessive water ingestion in psychiatric patients especially clinical course and

treatment of 'Obsessive Compulsive Disorder (OCD)', which have been rarely encountered in the literature.

CASE REPORT

Thirty-nine-years-old, single, primary school graduate, living in a village, house wife female patient. A written informed consent was obtained. The patient's first psychiatric complaints began in 1990. Including; afraid of being AIDS or cancer, constantly thinking that her hands are dirty; frequent hand washing, staying in bathroom for a long time, doing a job again, not leaving home to avoid encountering "bad" people in the country of residence. She used fluoxetine recommended by a psychiatrist at that time for a period of about 1 year at a dose of 60 mg / day. When she had got benefit, she stopped by herself. About 4 years ago, she was diagnosed with diabetes mellitus (DM) and osteoporosis and oral antidiabetic treatment was started. At that time, the intake of water up to 3-5 liters per day was thought to be related to diabetes mellitus. As she has noticed that there was a relief and decrease in anxiety after drinking water, she started drinking about 20 liters of water a day for about 6 months to get rid of the "bad thoughts" from her mind.

The patient was examined in the internal medicine clinic and no any cause other than DM could be discovered. The patient was referred to the open psychiatric clinic with the diagnosis of "psychogenic polydipsia" evaluated by psychiatric consultant.

As the second of four siblings, she was born in a village

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with the help of a midwife at term. Both mental and motor development in childhood were normal. Communicating skills with her brothers were generally good. All of her siblings had meticulous and regular temperamental characteristics. There was no other psychiatric illness in her family. Since there wasn't a high school in her village, she could not continue her higher education, she helped her family in their field work, and was not married. She described herself as a meticulous, clean, docile, self-interested person who likes people.

Regarding mental status examination, self-care was in line with her sociocultural level. Moderate depressive affect was observed, depressive mood was defined. Speaking amount, remote, close and immediate memory, and abstract thinking ability were normal. Her associations were spontaneous and eligible to self and purpose. She had sexual-oriented obsessions such as doing something ashamed by establishing a relationship with a man and fear of being sexually abused. Other obsessions were involving contamination of dirt, and ruminative obsessions in the form of thinking about cancer. Compensations in the form of drinking more water than other people who she do not like; washing, cleaning compulsions were defined. Delusions and hallucinations were not defined. Clinically normal intelligence impression was obtained.

The patient was diagnosed with OCD according to DSM 4. At clinical follow-up, routine laboratory examinations were requested. Fasting Blood Sugar:78 mg/dl, Urea:18 mg/dl, Creatinine:0.8 mg/dl, SGOT:20 U/L, SGPT:19 U/L, GGT:26 U/L, Total cholesterol:165 mg/dl, triglycerides:129 mg/dl, HDL-K:42 mg/dl, LDL-K:97 mg/dl, Na:139 mEq/l, K:3.9 mEq/l, Ca:10.3 mg/dl, P :5.5 mg/dl. Hemogram: Leukocyte:7300/mm³, Hb:12 gr/dl, Ht: 38%, Platelets: 395.000/mm³. Urine examination: density:1005, pH:6.5, protein:(-), ketone:(-), glucose:(-), bilirubin:(-), urobilinogen:(-), urine sediment:1-2 Leukocyte. Endocrinological examinations were normal. Ultrasonography of the abdomen revealed bilateral extrarenal pelvis, which was more prominent on the left. No abnormal findings were found in brain tomography. Fluid input and output were followed. The daily urine output was 10 liters. Consultation from 'Physical Therapy and Rehabilitation Unit' was requested. Early onset osteoporosis was reported to be due to long-term inactivation secondary to diabetes mellitus and obsessions. Fluoxetine treatment, which she had previously benefited from was restarted. The dose was gradually increased to 80 mg/day. Obsessive-compulsive disorder and major depressive disorder were diagnosed with SCID interview. As a result of the psychometric tests performed to evaluate symptom severity, score of the Yale-Brown Obsessional Compulsion Rating Scale (Y-BOCRS):32 and score of Hamilton Depression Rating Scale (HDRS): 15. The amount of consumed water (an average of 7-8 bottles per day from 2.5 liter pet bottles) was gradually reduced. Daily water intake was reduced to less than 3 liters. Weekly psychometric tests of the

patient revealed a significant decrease in the severity of obsessive-compulsive and depressive symptoms during clinical follow-up (Y-BOCRS: 18 and HDDÖ: 7). The patient was discharged with a daily dose of 80 mg fluoxetine. The follow-up of the patient continued at outpatient clinics with intervals of 2 weeks in the first 3 months. The patient is still in remission.

DISCUSSIONS

This case was evaluated as a polydipsia secondary to OCD because the fact that the purpose of the patient's excessive water drinking is to get rid of obsessional ridiculous thoughts, that patient can not block, using water to get rid of thoughts. An additional psychiatric disorder other than depression or other medical illnesses could not be detected. In literature, it has been reported that increased intake of water may be associated with psychotic processes in schizophrenic patients, with an impulsive behaviour in a patient with impulse control problem and with sociocultural beliefs in cases without any psychiatric disease. (6).

In the treatment of psychogenic polydipsia, antipsychotics, SSRIs, clomipramine, antihypertensives, ACE inh. were used. (1,6-8). Although there are other reports in literature that fluoxetine improves water intake by causing inappropriate ADH release, in this case, fluoxetine was successful in the treatment of psychogenic polydipsia secondary to OCD. The association of psychogenic polydipsia and different psychiatric conditions, different mechanisms of drug response, as well as retreatment with the same medication suggest the complex and multifactorial situation in the etiopathogenesis of this disorder. In some studies, it was suggested that increased ANP by water intake decreased the amount of dopamine under effect of prolactin and lead to anxiolytic activity (9,10). However, in psychiatric patients with excessive fluid intake; water poisoning with headache, ataxia, lethargy, confusion, dysarthria, tremor, restlessness, urinary incontinence and deterioration of serum electrolyte values could occur (11).

Excessive water intake not only affect the central nervous system but also can cause many medical complications such as, hydronephrosis that was reported (3). In our case, the amount of received water was 20 liters per day, but water intoxication did not develop, and psychiatric treatment did not cause any medical complication.

Psychogenic polydipsia, characterized by drinking too much water without physiological stimuli, should always be considered in the differential diagnosis of polyuria and polydipsia. Water restriction test should be applied in differential diagnosis of psychogenic polydipsia with central and nephrogenic diabetes insipidus. In the literature, a 4 years-old child with psychogenic polydipsia was reported to have started 'desmopressin' without water restriction test (12).

Gradually reducing water intake, taking daily water

intake in controlled bottles and listing amount of water intake by the patient, following up urine output, informing the patient about possible damages of excessive water intake have been suggested in literature (2). These behavioral methods have also been applied to our patient. The patient who had a history of obsessive-compulsive disorder and who had previously benefited from fluoxetine, had benefited from treatment with applied behavioral methods and fluoxetine 80 mg/day. Obsessions, compulsions, and water intake were significantly reduced during discharge. Antipsychotics were more emphasized in the treatment of psychogenic polydipsia, clozapine has been shown to be the most effective antipsychotic (7). Although excessive water drinking with fluoxetine has been reported, excessive water drinking has been reduced by fluoxetine treatment in our case. For this reason, patient-specific treatment choice should be considered.

CONCLUSION

Psychiatric patients are at risk for excessive water intake due to the clinical features of their illnesses and the psychiatric drugs (such as lithium) they use. Attention should be paid to the amount of water input and output in the follow-up of psychiatric patients. Fluid restriction test must be performed in cases of excessive water intake, psychogenic polydipsia should come to mind at the differential diagnosis. In addition, SSRI and cognitive behavioral methods should not be forgotten among other treatment options in the treatment of psychogenic polydipsia.

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