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Coprophagia in an older adult with Schizophrenia- A case report and brief review

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Abstract

Background: Coprophagia, the act of consuming one's own feces is a rare symptom of certain neurological or psychiatric disorders including pica, mental retardation, seizure disorder, cerebral atrophy and tumors, alcoholism, depression, obsessive compulsive disorder, schizophrenia, delirium, and dementia. Coprophagia is difficult to treat and distressing for the caregiver. It can lead to complications including salivary infections, parasitic infestations, and even death.

Method: A 63-year-old man with history of schizophrenia was admitted to the psychiatric unit for aggressive and disorganized behavior. He was treated with multiple psychotropics including aripiprazole, mirtazapine, quetiapine, lorazepam, and risperidone over a course of four weeks.

Results: The Clinical Global Impression (CGI) severity score at baseline was markedly ill (5). Initial CGI- improvement score after a week was much worse (6). The CGI-I worsened to very much worse (7). After introduction of quetiapine in 1 weeks' time, patient's CGI-I improved to minimally improved (3), and at discharge after 6 weeks, to much improved (2), indicating significant improvement.

Conclusion: Coprophagia is a difficult to treat and is a distressing symptom. Treatment with quetiapine appears to have helped our patient. There is paucity of published studies and future large scale studies with medication and other behavioral interventions are recommended.

Introduction

Coprophagia is the act of consuming one's own feces and is a relatively rare symptom associated with neurological or psychiatric disorders. This behavior can be associated with multiple psychiatric and medical conditions. Although it has been reported as a symptom primarily associated with pica [1], mental retardation [2], and new-onset psychiatric conditions [3], coprophagia can be seen in other medical disorders including seizure disorders, cerebral atrophy, and tumors [4]. Furthermore, psychiatric disorders associated with coprophagia include alcoholism, depression, obsessive-compulsive disorder, schizophrenia, fetishes, delirium, and dementia [4]. Addressing the underlying cause and treatment of coprophagia is important as it can lead to oral and salivary infections, gastrointestinal parasitic infestations, and even death. This behavior is also difficult to manage for nursing staff and other caregivers in facilities, as there is very little information about the treatment protocol. There have been few reports on coprophagia in schizophrenic patients. Distinguishing coprophagia as a symptom of an underlying comorbidity from symptoms of patient's psychosis is important for determining the best course of treatment. The current literature describes a few strategies that have been reported to be effective. However, there is paucity of publications or research regarding this condition. We report a case of coprophagia in a patient with schizophrenia who responded to a combination of quetiapine, risperidone, and sertraline along with psychotherapeutic interventions.

Case report

Patient was a 63-year-old Hispanic man from a nursing home, with past psychiatric history of schizophrenia and medical history of hypertension, diabetes mellitus, hyperlipidemia, hypothyroidism, asthma, benign prostatic hyperplasia and gastro-esophageal reflux disease, sent for aggressive and disorganized behavior on 08/16/2017. Prior to coming to the emergency department (ED), patient was reported to be yelling and screaming, "I'm crazy! I'm crazy, I don't belong here." As per the nursing home records, patient was compliant with all his medications, including losartan 25 mg daily, metformin 850 mg twice a day, levothyroxine 100 mcg daily, simvastatin 20 mg daily, tamsulosin 0.4 mg at night, aripiprazole 10 mg daily and mirtazapine 30 mg at night. In the ED, he was noted to be unkempt, withdrawn, and hostile with inappropriate eye contact. His speech was minimal with blunted affect. He was responding to internal stimuli, with minimal communication. Patient was admitted to the psychiatric inpatient unit. Clinical Global Impression severity of illness scale [5] (CGI-S) done on 08/17/17 was 5 (markedly ill) (Figure 1). Physical exam did not reveal any abnormalities. Laboratory test including complete blood count, comprehensive metabolic profile and thyroid stimulating hormone levels were not significant. Hemoglobin A1c was elevated at 8.5. Urinalysis showed trace leukocyte esterase and insignificant bacterial count suggesting no infection. Computed tomography scan of the head did not reveal any abnormalities. Aripiprazole was increased to 15 mg at bedtime on 08/17/17 and mirtazapine 30 mg at bedtime

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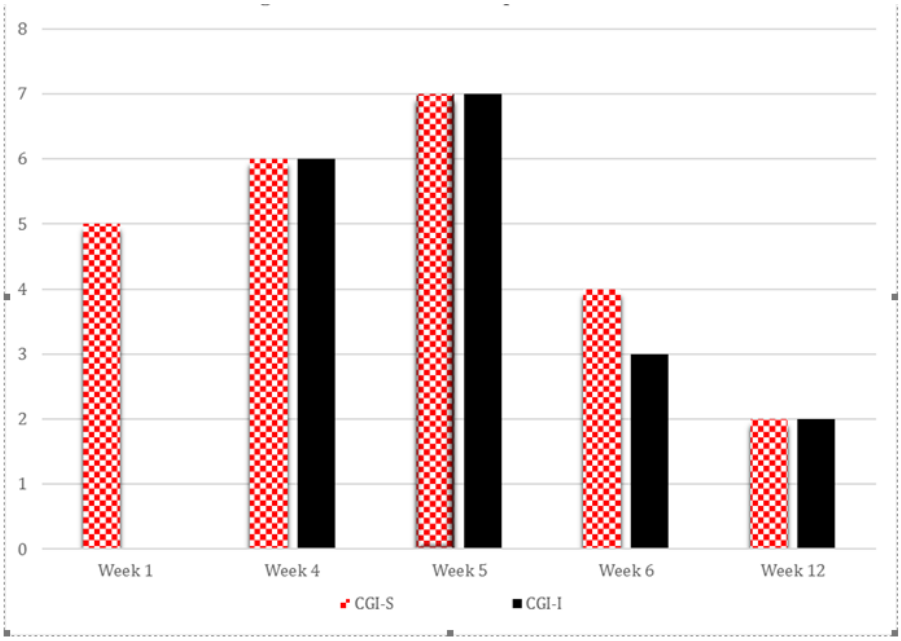

Figure 1. Clinical global impression scale

was continued. Patient continued to be seclusive and nonverbal with blunted affect. On 08/25/17 aripiprazole was increased to 30 mg, and ativan 0.5 mg was started twice a day for catatonic features. On 09/12/17 patient showed mild improvement and became more verbal but ativan was discontinued after a fall. Patient was unable to give any explanation but denied extremity pain or being in any acute distress after the fall.

Two days after the ativan was discontinued patient became more disorganized, running naked in the hallways, and scratching his upper and lower extremities severely enough to cause bleeding. The CGI-severity of illness scale and Global Improvement scale (CGI-I) [5] done on 09/15/17 were 6 and 6 respectively (Figure 1). Dermatology consultation recommended N-Acetylcysteine (NAC) for neurotic excoriations, but patient continued to scratch himself multiple times during the day and NAC was discontinued after a week because of lack of improvement. During the same week, patient had two episodes of coprophagia where he was observed to have ingested feces in his mouth. CGI-S [5] and CGI-I done on 09/20/17 were both 7. Quetiapine 100mg was started on 09/20/17, in view of the coprophagia symptoms aripiprazole was cross- titrated and eventually discontinued on 09/27/17. Quetiapine was titrated up to 400 mg twice a day on 09/27/17 to its maximum recommended dose [6]. Patient's scratching behavior decreased and he became more verbal again and CGI-S and CGI-I done on 09/28/17 were 4 and 3, respectively. Patient also received supportive milieu and activity therapies during the course of hospitalization. However, patient endorsed auditory and visual hallucinations, and feelings of depression. Patient reported hearing and seeing his children along with other family members. He also complained of feelings of guilt regarding not being with his family and abandoning them. Risperidone 0.5 mg was started on 10/04/17 and titrated up to 2 mg BID on 10/09/17, for persistent auditory and visual hallucinations. Patient reported improvement in his perceptual disturbances, which eventually subsided. Patient was also started on Sertraline 50 mg on 10/10/17 and titrated to 100 mg for depression. Patient showed marked improvement over the next four weeks. No further episodes of self-mutilation or coprophagia were noted. He became more visible in the unit and started to interact with his peers. The CGI-S and CGI-I done on 11/13/17 were both 2, indicating significant improvement (Figure 1). Patient was eventually discharged back to the nursing home.

Discussion and conclusion

Coprophagia is a well- documented behavior in animals but very rare in humans. There have been anecdotal reports of coprophagia with pica [1], mental retardation [2] and schizophrenia [3]. Our patient had chronic schizophrenia and exhibited two episodes of coprophagia and persistent excoriative behavior during the index hospitalization. Aripiprazole was continued and titrated to the maximum recommended dose, because he had been successfully treated with aripiprazole in the past. Pardini [2] has reported treatment of coprophagia using aripiprazole in a patient with autistic disorder. It was reported that aripiprazole was found to be effective in the treatment of irritability associated with autism. At maximum dosage, however, our patient's condition deteriorated, and he had another episode of coprophagia. Quetiapine was started, as it has been shown to have a marked effect on improvement of cognition compared to older antipsychotics [7]. It has also been shown to have pronounced efficacy in reducing anxiety related symptoms due to its sedative effects, as it has a potent antagonist effect on 5-HT2A receptor [8,9]. At maximum dosage of quetiapine, the self-mutilating behavior and the coprophagic episodes seem to have decreased significantly but psychosis did not. Risperidone was initiated because of its anti-psychotic properties mediated through D2 receptor antagonism. A positron emission tomography study showed that risperidone occupies 75-80% of striatal D2 receptors when administered to patients suffering from schizophrenia at a dose of 6 mg/day [10]. Risperidone is also reported to have some efficacy in controlling the negative schizophrenic symptoms [11]. In addition, Marder [11] also reports that this drug was preferred because the incidence of extrapyramidal symptoms in patients receiving up to 6mg of risperidone was no higher than that in patients receiving placebo. Sertraline was added to the regimen, as it was possible that this behavior was linked to anxiety or obsessive- compulsive behavior. There are reports of successful treatment of coprophagia with selective serotonin reuptake inhibitors and behavioral therapy as these may

help the depression, anxiety or obsessive compulsive disorder, which may be the underlying cause [4,12]. Behavioral therapies could not be attempted in our patient since he was poorly communicative and very disorganized. We were also unable to explore the underlying psychological reasons for this behavior as our patient had limited intellect, poor judgment, and insight. Limitations of our study include the single nature of the case report, use of multiple medications, and unsuitability of the patient to undergo behavioral therapies. Future prospective studies with medication or behavioral interventions in larger group of patients are recommended.

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