

# Delusion of Snake Infestation Following Sexual Intercourse: Report of Two Cases

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**ABSTRACT:** *Delusional infestation, a condition wherein a person believes his or her body to be infested with living organisms, has been observed in patients with primary psychotic disorders, as well as those with psychotic episodes secondary to mood disorders. Here we describe two similar cases of delusional snake infestation following sexual intercourse in female patients, one with schizophrenia and the other with new diagnosis of bipolar disorder. During the course of hospitalization, both patients misinterpreted abdominal pain/abnormal sensation following sexual intercourse as snakes infesting various parts of the abdomen and genital tract. In both cases, symptoms rapidly resolved after antipsychotic and appropriate medical treatment.*

**Key words:** *Delusional parasitosis, delusional infestation, somatic delusion, snake delusion.*

## INTRODUCTION

Delusional parasitosis can present as a unique symptom or as a component of a full blown psychotic episode. The typical picture is of a patient who seeks medical attention for an infestation of the skin by small, usually infectious pathogens. There may be somatic symptoms such as formication, sensation of insects crawling under the skin (Freudenmann & Lepping, 2009). Rarely, these delusions have taken the form of larger parasites, such as rats or snakes, infesting various internal cavities and organs (Tenyi & Trixler, 1993). Delusions of larger parasites are generally termed delusional infestations. Here we present two very similar cases of atypical delusional infestation, one in a patient with schizophrenia and the other in a patient with bipolar disorder. Both cases are unusual due to the size and nature of the parasite, as well as the sites of infestation.

## CASES PRESENTATION

### CASE 1

Patient with a history of schizophrenia as well as alcohol, cocaine, and cannabis use disorder that was brought to the emergency room by police because of disorganized behavior. She was found in possession of an eight-inch steak knife with which she planned to remove a snake from her stomach through her abdominal wall. She reported that the snake had been moving around in her stomach for two months, and she also reported attempting to remove the snake through her vagina. She had been noncompliant with oral haloperidol.

Her psychiatric history included numerous hospitalizations for disorganized behavior, two suicide attempts, and sexual assault as an adult. She was college-educated and had a physical therapist license. She had two children: one died at birth, and the other passed away four months after birth. She reported a history of gastritis characterized by epigastric pain that preceded and was relieved by meals. She further reported skipping meals frequently for several months.

On evaluation, the patient was disheveled and malodorous with flattened affect. She denied auditory hallucinations, and her thought process was somewhat tangential. She was disorganized, paranoid, and perseverant about somatic delusions regarding snakes. She was hospitalized voluntarily and started on haloperidol and esomeprazole. She also received metronidazole for vaginosis and doxycycline for a urinary tract infection.

During hospitalization the patient reported having had nonconsensual sex with a man who introduced a snake into her body through intercourse. She believed that the snake had made a nest and laid eggs inside her gallbladder and that these eggs could hatch at any moment, and was very disturbed by the notion of having even more snakes in her body. The patient requested an abdominal x-ray to confirm her beliefs. Additionally, the patient reported persecutory delusions of prostitutes that put a pin on her anus. She was very suspicious of her roommate, and believed that prostitutes would come to her room to harm her at night.

During the following days, the character of the patient's delusions evolved. At one point she complained of nausea and said that the snake had teeth and was eating her abdominal organs. Later, she said the snake broke muscular and bony structures to move inside her thorax and insisted on a chest x-ray despite denial of breathing problems. She could not explain how her vital signs and physical condition were stable despite the snake eating some of her internal organs. She believed that surgery was the only way to remove the snake from her body and asked for such intervention. Nearing the end of her hospitalization, she complained of back pain and said 'the snakes are doing it'. After five days of inpatient care, the patient's delusions decreased in intensity and frequency. She no longer felt the snake moving inside her body, and she appeared much less disturbed by this idea. She also denied persecutory delusions or delusions of harm. Her thought process became goal-directed. Haldol decanoate was given prior to discharge. At the time of discharge, her delusional infestation had attenuated to the point that she did not complain of somatic symptoms or sensations of internal movement.

### CASE 2

Patient with a history of marijuana and alcohol use disorder

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who was brought to the hospital by family for increasingly bizarre behavior. She had been admitted and discharged the previous week after placing a suicidal note in her daughter's lunchbox. During this previous admission, she was diagnosed with bipolar I disorder. On arrival to the emergency room, her chief complaint was, "I think I am pregnant". Earlier, she had called an ambulance and visited another emergency room with the same complaint. Upon arrival, she complained of vaginal discharge and because of this believed her water had broken. She reported that she had not had a period for six months and that earlier two men had attempted to impregnate her. When they told her they were successful, she believed them.

The patient's family reported that she was functioning normally until about two months prior when she left the state after hearing about a warrant for her arrest in another state. She reportedly traveled to respond to the warrant, only to learn that it was issued for another person with the same name. She returned home twenty days later with extreme mood lability, disorganized thoughts, and delusions of pregnancy.

The patient reported no past medical history. She was college-educated with a biology degree. She had four children and three miscarriages. On admission, Ms. J exhibited labile affect, disorganized thought process, and somatic delusions. She reported burning abdominal pain that worsened with meals, and severe abdominal cramping which was poorly localized along with a sensation of vaginal fullness. She frequently demanded pelvic exams, abdominal and transvaginal ultrasounds and bloodwork to demonstrate her pregnancy, even after repeated urine pregnancy tests returned negative. Her delusions were not limited to a false pregnancy. At several points she requested a pelvic exam because she believed that there were multiple snakes in her vagina and lower abdomen. She repeatedly inserted her fingers and hand into both her vagina and rectum attempting to find and remove these snakes. Subsequently, she developed urinary frequency and dysuria, and urinalysis revealed a urinary tract infection.

Pelvic exam was normal with no cervical motion tenderness. Abdominal and transvaginal ultrasounds were unremarkable and patient was allowed to view these results directly. Electroencephalogram showed nonspecific background slowing consistent with medication effects, and brain magnetic resonance imaging was unremarkable.

Lithium was restarted, and risperidone was initiated. Her urinary infection was treated with trimethoprim-sulfamethoxazole, and she was placed on pantoprazole. Her mood lability improved substantially, and eventually she reported significant reduction in her physical discomfort. Organization of thoughts and behavior improved, and delusions of pregnancy and snakes in her vagina resolved. She reported that this was due to seeing the results of her transvaginal ultrasound.

Though she no longer exhibited signs of delusional infestation or false pregnancy on discharge, some aberrant thoughts remained. For example, she said that if she experienced any further vaginal discharge following sexual intercourse, she would return to the hospital to check if her water had broken.

## DISCUSSION

We present two cases of psychotic women with somatic delusions of snake infestation following sexual intercourse. The fact that one

suffered from schizophrenia and the other from bipolar disorder illustrates the occurrence of this type of delusions in patients with both primary psychotic and mood disorders, as previously reported (McGilchrist & Cutting, 1995).

A growing literature has shown information processing deficits in animal models of psychosis and schizophrenic patients (Javitt, 2009). Abnormalities in sensorimotor gating, the ability to filter irrelevant stimuli in order to attend to current pressing ones, have been consistently reported as impaired in schizophrenic patients and in healthy controls receiving stimulants. This impairment improves with antipsychotic treatment (Swerdlow et al., 2008). Of note, recent evidence suggests particular frontothalamic structural abnormalities in schizophrenic patients with somatic delusions (Spalletta et al., 2013). Both cases presented here describe the onset of irregular abdominal and/or genital sensation following recent sexual activity and possible gastritis leading to the false interpretation of these physical symptoms as the presence of a snake infestation in the abdomino-genital region. These snake delusions were resolved after administration of antipsychotic and medical therapy. The most parsimonious explanation for these rare presentations is likely that an acute state of psychosis with subsequent impairment of sensorimotor gating of internal stimuli processing would set the grounds for assigning concrete and idiosyncratic interpretation of unfamiliar, frightening and often painful stimuli caused by physical illness.

These cases emphasize two important features about patients with delusional infestation in the context of a psychotic episode. First, it is necessary to investigate potentially treatable underlying medical illness causing misinterpreted stimuli resulting in bizarre somatic complaints in psychiatric patients (Reeves & Torres, 2003). Second, clinicians should be aware of the possibility of self-injurious behavior, including suicide, triggered by somatic delusions; therefore, the need to assess their severity and provide adequate interventions.

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