A 67-year-old Woman with Depression

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A 67-year-old woman had been residing in a nursing home after having a bilateral knee amputation as a complication of long-standing diabetes. She was brought to the attention of psychiatric services due to long-term depression, recent onset of visual hallucinations of insects flying in the room, and tactile hallucinations of insects crawling on her body. The sensation of insects crawling on her body caused her to scratch herself repeatedly, resulting in multiple skin lesions. A dermatology consult was placed, but upon no evidence of infection or infestation, psychiatry was consulted.

She appeared depressed with increased fatigue, decreased appetite, nonspecific weight changes, decreased sleep of 4 to 5 hours per night with late insomnia, and reduced concentration. She remained predominantly isolative and withdrawn but was not suicidal.

In the past, the patient was hospitalized five times for depression, with an episode of delusions of parasitic infestation resulting in her calling the sanitation department to her home.

Her social history revealed a lifestyle marked by meticulousness, obsessions about order, and cleanliness. She grew up in a low-income family, and her parents separated when she was very young. Her family’s financial limitations caused her to interrupt her education and obtain employment at an early age. As a child, she described herself as being self-reliant and resilient due to her distant and harsh parents.

She married at an early age. She said her husband was unsupportive and physically abusive. They later divorced. She then became very withdrawn. However, she displayed a marked indifference to her social isolation and loneliness.

Treatment began with initial laboratory tests including CBC with differentials, P14, vitamin B1, B6, B12, folate levels, RPR, and urine analysis. The results of the tests were within normal limits. A computerized tomography (CT) scan of the brain, without contrast, revealed no pathologies or focal lesions. A magnetic resonance image (MRI) of the brain was scheduled to rule out any lesions secondary to the diabetes mellitus, but the patient refused the procedure.

The patient was initially treated with duloxetine 60 mg once daily for depression. The dose was increased to 120 mg daily. She continued to exhibit a decrease in fatigue and appetite were initially impaired due to her social isolation and loneliness.

She continued to work a low-income job in the US. She had initial adjustment difficulties, stemming from the language barrier. Over time, she adjusted well and assimilated into the culture. After her medical illness started, she again had difficulties supporting herself and, gradually, her behavior changed. She then became very withdrawn. However, she displayed a marked indifference to her social isolation and loneliness.

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but responded well and showed improvement after starting mirtazapine 7.5 mg orally once daily at night.

Her Hamilton Depression Rating Scale (HAM-D) score improved from 11 to 9. The somatic delusions and visual hallucinations were initially treated with aripiprazole 5 mg orally once daily and was titrated up to 15 mg daily in accordance with recent clinical research.1-3

Because the patient continuously scratched her skin, a methicillin-resistant *Staphylococcus aureus* (MRSA) infection developed. The MRSA infection was treated with antibiotics and contact isolation precautions. The patient gradually improved with a Brief Psychiatric Rating Scale (BPRS) reduction from 41 to 35 and a reduction in the intensity of the visual hallucinations. However, the patient continued to believe that the insects infested her skin.

**DISCUSSION**

Ekbom’s syndrome was first observed in the early 1800s, although Wilson and Miller first introduced the term in 1946. The syndrome is estimated at less than three per 1,000 psychiatric admissions, with a point prevalence of 40 per million population.4 Women appear to be affected more often than men. Studies show an overall female-to-male ratio of 2:1, but before 50 years, it is 1:1.4 The age distribution shows a peak between the age of 50 and 80 years.5

Delusional parasitosis is also known as Ekbom’s syndrome, dermatophobia, delusions of infestation, or in German as “dermatozoen-wahn.”6 Patients with this disorder present with the fixed belief that their own body and the surrounding environment are infested with parasites. Patients try to alleviate this condition by scratching themselves or, in the most severe cases, use disinfectants to eradicate the perceived insect infestation. These patients often reject psychiatric treatment.

Delusional parasitosis could be a primary disorder, or it could be secondary to other major medical, neurological, or psychiatric disorders. Primary delusional parasitosis (PDP) indicates the delusion arises spontaneously as a monodimensional disorder. Secondary delusional parasitosis (SDP) occurs when the delusional disorder arises secondary to another major medical, neurological, or psychiatric disorder, including schizophrenia; dementia; depression; diabetes; neuropathy; cardiovascular accidents; illicit drug use (eg, cocaine or amphetamine); or side effects of prescribed medications.

Multiple hypotheses have been proposed to explain the underlying pathology of delusional parasitosis.5,6 Huber et al. suggested that decreased striatal dopamine transporter functioning may be responsible for delusional parasitosis symptoms.7 The putamen, in addition to its role in motor regulation, mediates visual-tactile perception. Disturbed functioning of the putamen and associated brain areas of the somatic/dorsal striato-thalamocortical loop may play a role in the pathophysiology of delusional parasitosis. This observation is supported by evidence of DP during intoxication with substances that affect the dopamine transporter (eg, cocaine, methylphenidate, buproprion).7 Dopamine transporter (DAT) is a presynaptic plasma membrane protein highly expressed in the putamen and is the key regulator of dopamine reuptake into the human brain. Ischemic insults to the striatal region cause degradation in DAT and decreased ligand binding in the damaged area.7

The patient’s psychodynamic profile fits into the psychodynamic formulation of Ekbom’s syndrome. She fits the profile of a middle-aged woman with the psychosocial stressors of being divorced, unemployed, and having impoverished interpersonal relationships. She also has physical disabilities in the context of her losses and depression with overvalued ideas of being unworthy, guilty, and unclean.

Her psychosocial stressors and increasing depression led to her overvalued ideas of worthlessness.
complication of long-standing diabetes cannot be ruled out.

MRI testing would provide concrete evidence for SDP, but the patient refused this procedure. The patient continued to present with parasitic delusions despite the treatment with antipsychotic medications. Meanwhile, continuous supportive psychotherapy was provided to better improve compliance and outcome.

CONCLUSION

The objective of this article was to present a case with the goal of highlighting possible etiologies of delusional parasitosis and clinical options to improve patient outcomes.

Ekbom’s syndrome is a chronic debilitating illness. It is imperative to have an integrated approach, which focuses on a good therapeutic alliance for better compliance, as well as involving the medical, psychiatric, and dermatologic specialties for comprehensive treatment of the illness. More research is needed to evolve better management strategies that address this syndrome and improve the quality of life of patients.

REFERENCES