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Worm in the head: A case report of long-standing Delusional Parasitosis in an elderly female

Dr.Purushottam Singh, Dr.DipikaVidhan, Dr. Sunil Regmi, Dr.DikshyaNeupane, Dr.Chandni Sharma
All India Institute of Medical Sciences, Rishikesh
All India Institute of Medical Sciences, Rishikesh
All India Institute of Medical Sciences, Rishikesh
All India Institute of Medical Sciences, Rishikesh
All India Institute of Medical Sciences, Rishikesh

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ABSTRACT:
Background:
Delusional parasitosis (DP) is an uncommon psychotic disorder often presenting after 4th decade. It is characterized by unshakable belief of being infested by parasite which lead to significant distress and multiple treatment seeking.
Case Presentation:
We present the case of a 54-year-old female, who presented with a history of firm fixed belief of worm infestation inside her brain and was convinced that it will lead to damage to her brain cells. She would feel worm crawling inside her head which led to distress and multiple treatment seeeking. She held the belief despite the contrary evidence supported by examination and imaging. She was managed with antipsychotic Aripiprazole which provided relief in her symptoms.
Conclusion:
We highlight the long-standing case of delusional parasitosis. Early recognition and evaluation for possible secondary causes is helpful. Antipsychotic treatment is effective in providing relief in the illness.

I. INTRODUCTION:

Delusional parasitosis (DP), also calledEkbom Syndrome, is an uncommon psychotic illness characterized by a firm belief of having been infested by a parasite when one is not. Delusional parasitosis can be primary, secondary, or organic. Primary delusional parasitosis consists primarily of a sudden onset single delusional belief of having been infested by a parasite.(1)Secondary form occur in conjunction with other mental disorders like schizophrenia, depression, and dementia. Organic illnesses like hypothyroidism, vitamin B12 deficiency, diabetes, cerebrovascular disease, cocaine intoxication, HIV, allergies, and menopausal state can also lead to delusional parasitosis.(2)

Patients may present with the cutaneous sensation of bugs (formication), pruritus, crawling, burrowing and biting. Patient may attempt to remove the bug which lead to bruising, traumatic alopecia, contact dermatitis and scarring. Patients often present with a small container (matchbox, pill container or a sealed plastic bag), classically known as a ‘‘matchbox sign”, enclosing the assumed/imagined organisms. On microscopy, samples appear to be hair, skin, fabric, dust, dirt, serum, ants and fleas, but devoid of real pathogenic organisms. (3)
Treatments of choice are second-generation antipsychotics such as risperidone or olanzapine in age-appropriate doses. Therapeutic use of Pimozide has declined owing to a higher risk of adverse drug reactions and lower concordance. (4)

Case Presentation:

54 year, married female, homemaker, with nil contributory past and family history of any psychiatric history; with no known comorbidity presented with a history of 20 years duration characterized by infestation by a worm in her head. She believed that she was infested by the worm which has entered through her right ear when she was young and since then the worm is present inside her brain and gradually damaging her brain by eating the nerve cells. She was worried that the worm would gradually damage all her brain tissue with no brain mass left inside, she would eventually die early. She also reported it to be crawling inside her head and changing position within the brain which she could feel. She had visited multiple specialists including ENT, Dermatology, Neurology, and Psychiatry. She had undergone an Ear examination and multiple blood investigations followed by Computed tomography

of head which did not reveal any abnormality. Despite the normal scans and examination findings and repeated assurance, she had continued to hold the belief. She had been prescribed medications earlier but none provided her with any relief. Details of other treatment history was not available. Patient was able to carry on with her daily household activities and her biological functions were within normal limit through the course of illness. She did not reported any low mood, self-harm ideations or free-floating anxiety except the distress related to her presentation.She did not held any other odd beliefs. There was no history suggestive of any head injury, central nervous system infections or ear infections.

On examination, her vitalsand systemic examination including an ENT examination revealed no any abnormality.On Mental Status Examination, her affect was distressed, delusion of parasitosis, tactile hallucination, and impaired insight.He was subsequently diagnosed as a case of persistent delusional disorder (monosymptomatichypochondriacal psychosis-delusional parasitosis) as per the International Classification of Disease (ICD-10-DCR) and managed with Tablet Aripiprazole 5mg and optimized to 10mg per day and advised for need of regular follow up and long term treatment. In follow-up after 2 weeks, she showed some improvement and was planned to keep on regular monthly follow-ups, but she was lost for further follow-upvisits.

II. DISCUSSION:

Delusional parasitosis (DP) is a delusional disorder characterized by a fixed belief of infestation by parasites, despite a lack of supporting medical evidence. Patients with delusional parasitosis do not meet the criteria for schizophrenia, including disorganized speech, disorganized or catatonic behavior, and negative symptoms such as avolition or blunted affect. (5)

The age of onset ranges from 5^{th} or 6^{th} decade which was also seen in our case. However, primary DP may occur in adolescents, and those in the age group of 20–40 years. (3)

Reich et al attributed to an increased extracellular dopamine level as potential etiological factor. (Reich et al)A systematic review also revealed that DP may evolve as sensory misinterpretation that transforms into a tactile hallucination and consolidates into delusions, or a hallucination that progresses to somatic delusion.(3)

Atypical antipsychotics like risperidone, olanzapine, and amisulpride has been used in treatment of DP based on the findings of case reports.While pimozide have positive response when compared to placebo, incidence of side effects have been higher. Rocha et al presented a successful report of 85 year old women with 5 years of symptoms.(6)

III. SUMMARY:

To conclude, delusional parasitosis often would present to non-psychiatric medical professional. They might seek multiple consult to seek relief. Reassurance regarding the lack of evidence of organic disease or direct confrontation rarely provides relief to the patient. It is important to establish a positive physician-patient relationship and to evaluate for other secondary possible causes. Controlled trials of second generation antipsychotics would help establish the efficacy in management.

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