Psychiatric Symptoms as the Sole Manifestation of Neurosyphilis

To the Editor: The incidence of syphilis in Singapore fell dramatically from 1978 to 1996. Unfortunately, there appeared to be a resurgence in the mid-1990s and early 2000s. According to a report by the Communicable Diseases Surveillance in Singapore, 2010, this trend has subsequently shown significant decline. The incidence rate of syphilis was 16 per 100,000 population in 2010, which was a 27.3% decrease from 22 per 100,000 population in 2009.

The typical presentation of neurosyphilis, marked by neurological and cognitive symptoms, has been replaced by atypical forms of the illness.[1] Psychiatric manifestations as the sole presentation remain a rare phenomenon.

Case Description

"Mr. H" is a 41-year-old Malay man with no past psychiatric history. He was admitted to the inpatient medical team after displaying a change in behavior for 6 days. Mr. H was hearing voices of multiple people, both men and women, who talked to him about religious matters. He also described seeing the images of tigers and other animals while he was in the hospital. Mr. H experienced tactile hallucinations: he felt "worms" moving over his arms. He firmly believed that God had granted him special powers to heal people and that his family was plotting to kill him, and, hence, he was not safe. He also believed that God was in complete control of his mind and body and that his body was infected with worms. He was elated, overly familiar, disinhibited, had pressured speech, psychomotor agitation, and poor sleep.

On mental state examination, Mr. H was a middle-aged Malay man, disheveled, repeatedly spitting into a cup, overly familiar, and restless. He was elated, and his affect was inappropriate. His speech was loud, with prominent stuttering. Mr. H displayed flight of ideas and loosening of associations. He had delusions of grandeur, persecution, and infestation. He also had auditory, visual, and tactile hallucinations. He had no insight into his illness. Mini-Mental State Exam revealed a score of 23/28; he did poorly on tasks testing attention and delayed recall. Neurological examination was unremarkable.

A lumbar puncture done 5 days after admission was Venereal Disease Research Laboratories (VDRL)-positive. Serology for other sexually transmitted infections was negative, Magnetic Resonance Imaging of the brain was normal. Mr. H completed 14 days of intravenous penicillin G. His behavior remained unmanageable, requiring multiple doses of parenteral rapid tranquilization and high-dose combination neuroleptics. He developed hand tremors to haloperidol at 4.5mg per day. Trifluoperazine and Sodium Valproate were ineffective in symptom control; 32 days after initiation of treatment, his symptoms slowly improved, and he was discharged stable. His medications at the time of discharge included olanzapine 15 mg/day, chlorpromazine 125 mg/day, carbamazepine 200 mg per day, diazepam 5 mg/day, and lorazepam 2 mg/day. As an outpatient, mood and cognition had improved; however, there were persistent delusions of infestation.

Discussion

Neurosyphilis has long been dubbed the "great imitator." Since the advent of effective treatment for syphilis in the form of penicillin, less importance has been given to neurosyphilis as a possible etiology in someone presenting as Mr. H did. Interestingly, Mr. H presented exclusively with psychiatric symptoms; this is a rare phenomenon, as we know that the classic presentation would usually be a stroke, memory impairment, or spinal cord signs.[1] Although neurosyphilis may present in a myriad of ways, a significant number of patients also present with an insidious dementing illness.[2]

There are several unique factors in Mr. H's psychiatric history and presentation that need to be highlighted. First, he presented for the first time at age 41 with psychiatric symptoms. Epidemiological studies have shown that men usually present in the second decade of life, with an index episode of a primary psychotic or affective disorder. Second, the spectrum of symptom phenomenology is wide: he had florid psychotic and affective symptoms and disproportionate cognitive impairment. Third, Mr H's symptoms were difficult to manage despite an aggressive pharmacological approach.

Danielsen et al.,[3] in their case series, showed that the median age for diagnosis of neurosyphilis of men and women was 47 years and 52 years, respectively, with over three-quarters being men. In this same case series, only 17% of patients presented with either psychiatric symptoms or dementia.

The treatment of choice for neurosyphilis is parenteral penicillin. As highlighted in Mr H's case, although the stipulated duration of antibiotics was completed, the neuropsychiatric symptoms continued to be a challenge long afterward. In the absence of clear guidelines addressing the issues of medication choice, dosing, approach to residual symptoms, and duration of treatment, a symptom-based approach was used; that is, psychotic symptoms were treated with antipsychotics; affective symptoms were treated with mood stabilizers; and so forth. A case series by Sanchez et al.[4] discussed treatment options. They suggested that haloperidol, quetiapine, and risperidone appeared effective. They also suggested that sodium valproate was effective in managing mood symptoms and agitation. This was not the case for Mr H, who failed trials of haloperidol and sodium valproate and eventually required high doses of a combination of antipsychotics, benzodiazepines, and carbamazepine as a mood-stabilizer. This case series also pointed out that there was no clear standard of care for the management of cognitive symptoms.

Given how rare and yet treatable the condition is, the open question, then, is how often we are missing it. More research is required in order to better understand and classify the disorder and its treatment.

Conclusion

This case illustrates the need for a high index of suspicion and prompt assessment of possible neurosyphilis when patients present with an acute onset of atypical clustering and wide spectrum of symptoms especially in the absence of a past psychiatric history. It also points out the prolonged nature of psychiatric symptoms and difficulties in treatment in the absence of clear guidelines.

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