Medical and Clinical Research: Open Access

Case Report

Psychiatric Symptoms of Neurosyphilis: About Two Cases

Nafiaa H[1]*, Taleb K[1], Zabarra M[2], Sabir M[1] and Toufiq J[1]

[1]Arrazi university psychiatric hospital, Faculty of Medicine and Pharmacy, Mohammed V University in Rabat, Morocco.
[2]Laboratory of Community Health, Preventive Medicine and Hygiene & Laboratory of Biostatistics, Clinical and Epidemiology Research, Department of Public Health, Faculty of Medicine and Pharmacy, Mohammed V University in Rabat, Morocco.

Corresponding Author Information

Nafiaa H

Arrazi University Psychiatric Hospital, Faculty of Medicine and Pharmacy, Mohammed V University in Rabat, Morocco.

Received: May 03, 2024; **Accepted:** June 11, 2024; **Published:** June 19, 2024

Citation: Nafiaa H, Taleb K, Zabarra M, Sabir M, Toufiq J. Psychiatric Symptoms of Neurosyphilis: About Two Cases. Med Clin Res Open Access. 2024; 5(1):1-3.

ABSTRACT

Although rare, neurosyphilis is one of the fatal complications of syphilis, which must be systematically evoked in the presence of a rapidly progressive dementia.

We report two cases of patients, a woman and a man, aged 67 and 65 respectively, whose diagnosis of neurosyphilis was purely fortuitous in the face of an isolated psychiatric picture, combining psychotic and dementia symptoms.

Practitioners should consider the diagnosis of neurosyphilis when faced with an inaugural psychiatric presentation, in order to improve prognosis and optimize management, which should be multidisciplinary.

KEYWORDS

Syphilis, Neurosyphilis, Dementia, Psychosis.

Introduction

Neurosyphilis is one of the fatal complications of syphilis, which can develop either early or late (after 1 year). Given the clinical polymorphism and multiple aspects of this pathology, its diagnosis often remains unrecognized by the patient, or is diagnosed at a late stage. In the cases reported in this article, the psychiatric picture was inaugural of the disease.

We report here two clinical cases of patients with neurosyphilis whose inaugural presentation was purely psychiatric. The first is a 67-year-old married housewife whose symptoms began 3 years ago with the onset of a major depressive episode with psychotic features, for which she was treated at the university psychiatric hospital. Her antecedent condition was syphilis, treated one year prior to hospitalization, with heteroaggressivity, incoherent speech and hallucinatory syndrome, justifying her admission to the neurocognitive disorders ward. During her hospital stay, she underwent a pretherapeutic and etiological work-up, which was normal. Her clinical course was marked by a poor response to psychotropic treatment; a week later, she presented with a confusional syndrome, impaired fixation memory and anosognosia. The rapidly progressive onset of a dementia syndrome prompted a laboratory work-up, which revealed an elevated creatine phosphokinase level of 460 IU/ and a positive syphilitic serology. This prompted her transfer to a geriatric department for further treatment. Magnetic resonance imaging revealed encephalic demyelinating lesions

strongly suggestive of the radiological appearance of neurosyphilis (figure1). She was started on rocephin 2g daily and doxicycline 200 mg daily for one month. Cerebrospinal fluid analysis by lumbar puncture was unremarkable. She was then transferred back to the neurocognitive disorders unit, where she was started on aripiprazole 10 mg, memantine 10 mg and donepezil 5 mg, a treatment which was readjusted at her aftercare appointments during her hospital stay. The clinical course was marked by a regression of visual and cenesthetic hallucinations, but memory and attention disorders remained unchanged. The second case involved a 65-year-old man with no notable pathological antecedents, who was referred to the geriatric psychiatry department for psychobehavioral disorders of insidious onset, dominated by a dementia syndrome of agitated seizures, psychomotor instability, incoherent verbalization, temporospatial disorientation and rapidly progressive memory disorders.

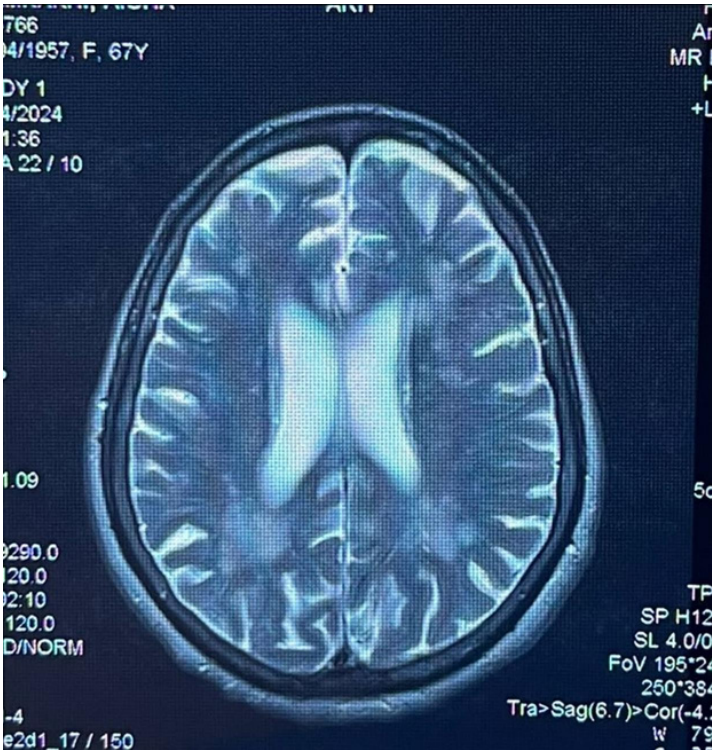

Figure 1: Frontal section of the MRI scan showing significant cortico-subcortical atrophy consistent with the patient's clinical symptoms.

A blood test revealed positive syphilitic serology (TPHA positive and VDRL positive), complemented by a cerebral CT scan demonstrating vascular leukoencephalopathy with ischemic lesions of different ages and sequelae, multiple punctate hypodense lesions of the periventricular white matter, widening of the cortical sulci and ventricular system, and aneurysmal dilatation of the right posterior communicating artery. Magnetic resonance imaging (MRI) confirmed the appearance of neurosyphilis. He was started on risperidone 2 mg daily and donepezil 10 mg daily. Progress was satisfactory, although some cognitive problems persisted. In addition to his psychiatric follow-up in our department, the patient was seen jointly by neurologists and geriatricians for optimal multidisciplinary management.

Discussion

Thanks to scientific advances in screening, diagnosis and treatment, neurosyphilis is becoming increasingly rare. In the majority of cases, there are no neurological symptoms in the first stage of the disease, as was the case with our two patients. In the second stage, meningitis, usually lymphocytic, may occur due to visceral dissemination of treponema [1]. In 2020, over 130,000 cases of syphilis were reported in the United States. The majority of primary and secondary syphilis cases are observed in men (81%), with 53% of cases involving men who have sex with men. The incidence of syphilis has increased rapidly in the USA; from 2015 to 2020, the rate of primary and secondary syphilis in women rose by 147% (from 1.9 to 4.7 per 100,000), and the rate in men rose by 34% (from 15.5 to 20.8 per 100,000) [2]. When neurosyphilis is neurovascular, neuropsychiatric symptoms such as behavioral disorders, lack of concentration, memory loss, weakness and insomnia may be observed. According to the largest series of neurosyphilis cases described since the use of penicillin (161 cases), 50.9% of cases reveal psychiatric manifestations (psychosis, delirium) and dementia. The maximum latency before onset of symptoms in this series was 41 years [3,6]. Neurosyphilis is a rather atypical cause of dementia, characterized by a rapid onset of psychiatric symptoms. The diagnosis of neurosyphilis should be made in the presence of a global cognitive disorder characterized by disorientation, amnesia and severe speech and judgment disorders, as well as subacute psychiatric symptoms such as depression, mania and psychosis [4-6]. Despite adequate treatment with penicillin, cognitive impairment generally persists, and treatment remains difficult. Cholinergic pathways are thought to be involved in neurosyphilis-induced cognitive impairment, and donepezil, whose mechanism of action is cholinesterase inhibition, could effectively improve cognitive function [7]. However, the course of the disease fluctuates. In the majority of cases, patients survive despite suffering psychiatric sequelae, as in the case reported by R. Mahmoudi, in which neurosyphilis caused a stroke and the patient died [8].

Conclusion

The two cases discussed above teach us that, although neurosyphilis is one of the rarest pathologies today, it is imperative to think about it when faced with a rapidly progressive onset of dementia with poor therapeutic response.

References

1. https://www.emconsulte.com/article/1528236/neurosyphilis#:~:text=La%20neurosyphilis%20est%20une%20complication,de%20neurosyphilis%20peut%20%C3%AAtre%20difficile.
2. https://www.msdmanuals.com/fr/professional/maladies-infectieuses/infections-sexuellement-transmissibles/syphilis
3. Forest A, Barrou Z, Verny M. Neurosyphilis et troubles cognitifs. Geriatr Psychol Neuropsychiatr Vieil. 2013; 11: 423-431.

4. Stefani A, Riello M, Rossini F, Mariotto S, Fenzi F, et al. Neurosyphilis manifesting with rapidly progressive dementia: report of three cases. Neurol Sci. 2013; 34: 2027-2030.
5. Zhong X, Haishan Shi, Le Hou, Ben Chen, Qi Peng, et al. Neuropsychiatric features of neurosyphilis: frequency, relationship with the severity of cognitive impairment and comparison with Alzheimer disease. Dement Geriatr Cogn Disord. 2017; 43: 308-319.
6. Mukku SSR, Safal SS, Raja Pritam, Nashi S, Nagarathna C, et al. Neurosyphilis presenting as rapidly progressive psychosis and dementia: a forgotten entity. Asian J Psychiatr. 2019; 40: 103-106.
7. WU YS, Hsien-Yuan Lane, Chieh-Hsin Lin. Donepezil improved cognitive deficits in a patient with neurosyphilis. Clin Neuropharmacol. 2015; 38: 156-157.
8. Mahmoudi R, Maheut-Bosser A, Hanesse B, Paille F. Neurosyphilis: a rare cause of dementia. Rev Med Interne. 2006; 27: 976-978.