Interface neurology/psychiatry: a case report of neurosyphilis

A. Silva[a], M. Arrojo[a], P. Ferreira[a], M. J. Sá[b] and A. P. Palha[a]

[a] Psychiatry and [b] Neurology Departments. Hospital São João. Medical School. Porto. Portugal

Interfaz neurología/psiquiatría: un caso de neurosífilis

Summary

Organic diseases can occur with different psychiatric symptoms. Neurosyphilis was considered to be a landmark in the history of organic mental syndromes. The complexity of its clinical picture decreases the boundaries between Neurology and Psychiatry and requires a multidisciplinary approach. We report a case of neurosyphilis that began with psychiatric symptoms in a twenty five years old male.

Key words: *Neurosyphilis. Schizophreniform disorder. Neurology. Psychiatry.*

Resumen

Las enfermedades orgánicas pueden presentarse con diferentes síntomas psiquiátricos. La neurosífilis ha sido considerada como un hito en la historia de los síndromes mentales orgánicos. La complejidad de su cuadro clínico estrecha las fronteras entre la Neurología y la Psiquiatría y demanda una aproximación multidisciplinaria. Presentamos un caso de neurosífilis que se inició con síntomas psiquiátricos en un varón de 25 años.

Palabras clave: *Neurosífilis. Trastorno esquizofreniforme. Neurología. Psiquiatría.*

INTRODUCTION

Organic diseases can be manifested with different psychiatric symptoms, neurosyphilis being one of those that presents the greatest psychopathology: psychotic pictures, personality disorders, confusional pictures, maniaform or depressive episodes and demential pictures[1].

At present, the classic forms of syphilis are rare while the atypical ones are more and more frequent. Resistance to penicillin, inadequate antibiotic treatment or subtherapeutic doses and the immunosuppression states, especially HIV and Hepatitis B, are mentioned by the different authors as determining factors[2-4].

CLINICAL CASE

A 25 year old caucasian male, married and employed in a bar. At the request of his family, he comes to the Emergency Service of our hospital due to behavior disorders.

The family reports a change in behavior and personality of the patient in recent months. He becomes irritated easily and is aggressive, presents much suspiciousness, emotional lability and loss of control of impulses. All this significantly interferes in his social and work life. He has hardly slept in recent days and refuses to eat due to fear of being poisoned. His family did not request help before because they interpreted everything as a consequence of his new marital situation (he is in the process of a divorce).

He was born at term without complications and with normal psychomotor development and completed elementary school studies. He is premorbidly described as an extroverted and happy person, with good social adaptation and good work performance. Without known personal or family psychiatric background. As medical background, a visit to the emergency service two months earlier due to back pain that was resolved after the administration of analgesics stands out.

In the emergency service examination, he is conscious and oriented, both auto as well as allopsychically. His speech is not always logical, presenting non-systematized delusional activity of persecutory content («they are against me») and control and influence («they put a microcamera in my tooth to control my movements»), verifying the existence of auditory hallucinatory activity (he hears critical voices that refer to his behavior). His thinking does not follow a logical structure (there is no link between ideas) and he has rare and disorganized behavior. He is perplexed and hypervigilent in relationship to environmental stimuli and presents moderate psychomotor agitation. Without evident mnesic disorders. He totally lacks insight.

In the Emergency Service, the physical and neurological examinations were normal, measurements of alcohol

Correspondence:
Manuel Arrojo Romero
Hospital São João
Departamento de Psiquiatría
Alameda Professor Hernaní Monteiro, s/n
4200 Porto (Portugal)
E-mail: marrojo@hotmail.com

in blood and abuse toxic agents (cannabis, opiates, cocaine) in urine were negative and the complete blood count and biochemistry did not show significant alterations. A brain CT scan was performed and only showed enlargement of the cisterna magna (anatomical variety), without alterations in the parenchyma and ventricular system. Neuroleptics were administered intravenously (haloperidol, 6 mg, and clorpromacine, 50 mg), with which sedation was achieved and the patient was admitted to the Psychiatry Service.

In the three following days, the patient fell into a state of mutism, lack of any spontaneity, being incapable of answering simple questions and spending almost all his time in bed. During this period, he remained without psychopharmaceutical treatment.

A second physical and neurological examination was normal. A new biochemistry examination (that included electrolytes, vitamin B_{12}, folic acid, glucose, GOT, GPT, LDH, BUN, creatinine and urea) was also normal and the hormone study (TSH, T3, T4) did not show thyroid pathology. An EEG was performed (alpha base rhythm normal at 9 Hz reactive to the opening-shutting of the eyes without irritative or paroxystic focal alterations at rest and/or with stimulation) and brain MRI that did not show alterations.

On the fourth day, he was agitated again, with intense delusional activity and auditory hallucinatory, but this time he was also disoriented and confused. Treatment was initiated with risperidone (3 mg orally/2 times × day) and lorazepam (2.5 mg orally/3 times × day). On the seventh day, he was totally asymptomatic.

The study was completed with serology for herpes virus, HBV, HCV and MCV that were negative and with luetic serology: VDRL (+ titer/16) and TPHA (+). The tests for HIV detection (Western Blot y ELISA) were negative. We requested collaboration from the Neurology Service, who decided to perform a lumbar puncture with the following results: VDRL (+), TPHA (+), cells (2/mm^3), glucose (75 mg/dl), proteins (66 mg/dl), IgG (+) oligoclonal bands. After verification of the diagnosis of neurosyphilis, treatment was begun with sodium penicillin G, alternating with potassium penicillin G in the recommended doses (4 million units i.v./4 hours) that was administered for 21 days.

During the first days of treatment, the patient presented a picture with fever, vomiting and delirium that was interpreted as a probable Jarisch-Herxheimer reaction[5,6]. During all this time, risperidone and lorazepam were maintained in the same doses and biperidene (2 mg/day) was introduced due to the appearance of mild extrapyramidal symptoms.

After treatment, the patient was discharged and followed-up regularly in the Psychiatry out-patient clinic. At present, he is asymptomatic and does not need treatment with psychopharmacologic treatment, that was gradually withdrawn after eleven months of follow-up.

DISCUSSION

In the first analysis, the biographic rupture in the life of the patient, the disorganized behavior with presence of non-systematized delusional content, together with auditory hallucinatory activity and the age of presentation lead to the suspicion of a form of onset of schizophrenia. In the premorbid personality study, no introversion traits or difficulty in social relationships, isolation or others that lead to the supposition of a schizoid or paranoid disorder of the personality are foretold.

The possibility of a manic picture with psychotic symptoms is rejected due to lack of expansive mood and flight of ideas. The family denies knowledge of toxic agent consumption by the patient and the drug abuse analysis is negative, although a toxic psychosis is not totally discarded as only cannabis, cocaine and opiates were analyzed.

The continuous changes in the clinical picture with moments of alternating dejection with pictures of extreme agitation, the periods of awareness alteration and rapid response to treatment with antipsychotics (totally asymptomatic at seven days of admission) leads to the suspicion of an organic brain syndrome, so that the initial study is completed, finally reaching the diagnosis of neurosyphilis.

It is estimated that the incidence of syphilis is equal to ten new cases for every 100,000 inhabitants per year and that of neurosyphilis, that initiates with psychiatric symptoms, is two new cases per every million inhabitants per year[7].

The clinical case that we present is a rare one due to its presentation form and the patient's age. In a review study of D'Olhaberriague et al. in 1989[2], that included 651 patients belonging to six different series diagnosed of syphilis (meningovascular form) during the pre-AIDS era, only one case was found in a patient under thirty years, although in recent years, some cases similar to ours have been published in young people[8,9].

In the neurophysiological and imaging tests of patients with syphilis, the EEG shows alterations in between 55% and 80% of the cases and the brain CT scan generally shows brain atrophy that can revert with treatment[7]. In our cases, both tests are normal.

Syphilis is being reintroduced into the medical practice, especially in states of immunodepression and in a considerable proportion in relationship with HIV, where its natural course can be accelerated, involvement of the nervous system appearing in early ages and after a short latency[2,5].

In our patients, the HIV and hepatitis B-C detection tests were negative and no signs that made us suspect immunodeficiency was found in the different studies performed (complete blood count, biochemistry, serology for MCV, etc.). In regards to the clinical course, after the recovery from the episode, the patient described an old genital lesion compatible with primary syphilis suffered a few years before.

Neurosyphilis sometimes causes schizophreniform pictures that may lead to diagnostic error easily if they are not well studied[9,10]. We believe that all of this justifies the systematic screening of neurosyphilis in first psychotic episodes and especially in cases in which there is alteration of awareness.

This clinical case shows the complexity and polymorphism in the psychopathological spectrum of this disease, emphasizing the importance of the multidisciplinary teams within the general hospital.

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