

NÖROSİFİLİS VE HASHİMOTO TİROİDİTİNİN PSİKİYATRİK GÖSTERGELERİ: NADİR BİR KOMORBİDİTENİN OLGU SUNUMU

PSYCHIATRIC MANIFESTATIONS OF NEUROSYPHILIS AND HASHIMOTO'S THYROIDITIS: A CASE REPORT OF A RARE COMORBIDITY

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Özet

Nörosifiliz (NS) ve Hashimoto tiroiditi nöropsikiyatrik semptomlarla karşımıza çıkabilir, bu nedenle psikiyatrik hastaların ayırıcı tanısında her zaman akılda tutulmalıdır. Bu hastalıkların varlığında psikiyatrik semptomlar fark edilemeyebilir. Bu olgu sunumunda, uzun süreden beri şizofreni tanısı olan ve hastalığın ileri döneminde NS ve hipotiroidi tanısı konan bir olgu sunulmuştur. Yetersiz klinik düzelme, bu iki tanının geç konmasına ve her iki organik etyolojiye geç müdahale edilmesine bağlı olabilir. (Anatol J Clin Investig 2011;5(4):191-194).

Anahtar Sözcükler: Sifiliz; nörosifiliz; Hashimoto tiroiditi; hipotiroidizm; bipolar bozukluk; psikoz

Abstract

Neurosyphilis (NSy) and Hashimoto's thyroiditis may present with neuropsychiatric symptoms so they should always be kept in mind in the differential diagnosis of psychiatric patients. Psychiatric symptoms with presence of these diseases cannot be realized. In this case report, we present a patient treated with the diagnosis of schizophrenia for a long time in which NSy and hypothyroidism were detected later in the course of illness. Unsatisfactory clinical improvement may be attributed to the late detection and consequently the late intervention for both organic etiologies. (Anatol J Clin Investig 2011;5(4):191-194).

Key Words: syphilis neurosyphilis, Hashimoto's thyroiditis, hypothyroidism, bipolar disorder, psychosis

Introduction

There is a resurgence of syphilis (Sy) worldwide and is still one of the most common sexually transmitted infections (STIs) in developing countries.[1] Late stage neurosyphilis (NSy) has started to be seen in various clinical manifestations. Therefore, diagnosis of NSy is often difficult. It is seldom suspected from clinical picture, and the cerebrospinal fluid (CSF) findings may also be atypical. The diagnosis is based on serology.[2] NSy may present with neuropsychiatric symptoms so it should always be kept in mind in the differential diagnosis of psychiatric patients.

Psychiatric symptoms and disorders may also be the initial or major manifestations of endocrine disorders, especially in thyroid diseases. The incidence of Hashimoto's thyroiditis is increasing dramatically.[3-5] The psychiatric symptoms include lability, anxiety, depression, agitation, delusions and hallucinations. Clinical findings may occur acutely as confusion or slowly as dementia or psychosis.[6,7]

In this case report we present a case treated with the diagnosis of schizophrenia for 10 years. Despite the fact that Sy serology was positive (serum VDRL) at first admission and existence of atypical features and inadequate treatment response during the course of illness, the patient

had not been further evaluated for NSy. Also, yet another confounding factor to the characteristics of the clinical picture was the hypothyroidism detected which was related to autoimmune Hashimoto's thyroiditis. Informed consent was obtained from the patient and relatives. FB was a 48 year-old female patient with four children. In first hospitalization, she had increased psychomotor activity, insomnia, logorrhea, verbal and physical aggression, auditory and visual hallucinations and delusions of persecution at 6 months pregnancy. In laboratory tests, serum rapid plasma reagin test (RPR) was positive and thyroid hormone levels were normal. Initial diagnosis was "bipolar disorder not otherwise specified (NOS) with psychotic features and unspecified general medical condition". Neurological examination was normal; obstetric consultation revealed 27-28 week pregnancy. Three sessions of electroconvulsive therapy (ECT) were administered. The patient was referred to a University Hospital for further Sy serological tests. But they were not performed and the patient lost to follow-up.

She was admitted 8 years later with insomnia, anorexia, physical aggression towards family members, visual and auditory hallucinations but with no affective symptoms. In laboratory findings, serum Venereal Disease Research

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Laboratory test (VDRL) was positive. The patient was treated with haloperidol 30mg/ day, chlorpromazine 200mg/ day, biperiden 10 mg/ day, clonazepam 2mg/ day and penicillin G benzathine 2.4 MU/ day (for 3 days) intramuscular with the diagnosis of "chronic schizophrenia and Sy". She was discharged in partial remission.

She was admitted again 3 months later with similar symptoms; additionally claiming that she had killed her mother-in-law. In laboratory findings, serum VDRL was positive in ¼ titer, the treponema pallidum haemagglutination assay (TPHA) test was negative. In thyroid hormone levels: TSH was elevated with level >100µIU/mL (0.7-4.2µIU/mL), T3 and T4 were decreased with levels 0.66ng/mL (0.8-2.0ng/mL) and 2.39µg/dL (5.1-14.1µg/dL), respectively. The patient was treated with haloperidol 30mg/day, chlorpromazine 100mg/day, biperiden 10 mg/day, carbamazepine 600mg/ day and levothyroxine 0.1 mg/ day with the diagnosis of "psychotic disorder NOS, Sy and hypothyroidism". The patient was referred to a tertiary referral hospital for further Sy evaluation; but again the tests were not performed.

Following, this hospitalization, the patient was admitted to our hospital once more 2 years later with worsened symptoms. During last hospitalization, she had verbal and physical aggression, behavioral disorders like trying to breastfeed her grandchildren, running away from home, and refusal of treatment.

Psychiatric examination revealed poor personal hygiene, psychomotor retardation, uncooperative behavior, irritability, sleep disturbance, blunted inappropriate affect, loosening of associations, absurd talking, confabulations, and lability of emotions, poor thought content and persecutory delusions. She had attention and concentration deficiency, memory impairment, disorientation in time, disturbance of consciousness and confusion (and fluctuations during the course of the day), impairment in abstract thinking and intellectual functioning, and lack of insight. She had no psychiatric family history. Her physical examination, and ophthalmology and dermatology consultations were normal. There were no pathological findings in neurological examination except predominant disturbances of consciousness and confusion; and marked deterioration in multiple cognitive skills.

In laboratory work-up routine chemistries, CBC and urinalysis were within the normal range. Thyroid hormone levels were decreased

[TSH>100uIU/mL, FT3<0.70pg/mL (2.0-5.0pg/mL), FT4<0.10ng/dL (0.7-1.7ng/dL)]. Thyroid autoantibodies were elevated (antiTPO=358.40 IU/mL, normal level<35IU/mL). Blood serum analyses demonstrated a negative HIV test, a positive RPR test, a positive VDRL in ½ titer and a positive treponema pallidum haemagglutination test (TPHA). A lumbar puncture was performed and cerebrospinal fluid (CSF) analysis revealed a protein level of 65mg/dL (15-50mg/dL), a positive VDRL and a positive TPHA. CSF glucose and cell count were within the normal range. These laboratory findings confirmed the diagnosis of NSy.

Her IQ was 50 score which was not correlated with her educational background and previous functional status. She had 13 score on the Mini-Mental State Examination (MMSE) indicating a marked cognitive impairment. The Bender Visual-Motor Gestalt test confirmed organicity.

Electroencephalogram (EEG) after activation was normal. Computerized tomography (CT) scan revealed mild corticosubcortical atrophy and millimetric lacunar gliotic foci in periventricular white matter, corona radiata and centrum semiovale which were speculated to be related to microvascular lesions. Cranial magnetic resonance imaging (MRI) displayed non-enhancing, nonspecific white matter signal changes in supratentorial area, bilateral centrum semiovale, corona radiata and periventricular area; and prominent lateral ventricles and the third ventricle.

With the above examinations and investigations, the patient was diagnosed with "psychotic disorder due to a general medical condition (NSy), and hypothyroidism due to Hashimoto's thyroiditis" according to DSM-IV criteria. The patient received IV aqueous crystalline penicillin G 24 IU daily (4x106 IU every 4 hour) for 15 days and levothyroxine 0.1 mg/day, while continuing her antipsychotic medication with haloperidol 30 mg/day, biperiden 10 mg/ day, chlorpromazine 400 mg/day. Later her antipsychotic medication was switched to olanzapine 20 mg/day and quetiapine 400 mg/day because of extrapyramidal side effects.

The laboratory work-up after treatment revealed positive serum VDRL in ½ titer, negative VDRL and a normal protein level of 44 mg/dL in CSF. There was slight improvement both in psychotic features and behavioral disturbances, and also in confusion and cognitive deficits. A repeat MMSE yielded a score of 16. But overall psychiatric treatment response was inadequate, thus the patient had three further hospitalizations in the

next 8 months. Her cognitive impairment persisted but she had no other neuropathological findings.

Discussion

During the course of illness, the patient was treated with a comorbid diagnosis of Sy, but although inadequate treatment response persisted, NSy was not further investigated. With a thorough laboratory investigation, not only NSy but also hypothyroidism due to Hashimoto's thyroiditis was detected. Both major organic factors may cause and contribute to all of the features of the clinical picture. It is striking that in a patient treated as schizophrenia for a long time, significant and treatable organic etiologies could be detected, both of which are reversible causes of dementia. NSy may present as virtually any psychiatric disorder, including personality disorder, psychosis, delirium and dementia.[8] Some other cases of NSy who manifested with predominantly psychiatric symptoms are reported in literature.[8-11] However, there is nothing in the literature about comorbidity of NSy with Hashimoto's thyroiditis.

In this case, there is a possibility of the psychiatric illness to be related to NSy first. The psychotic manifestation of NSy can be indistinguishable from psychotic features of schizophrenia with acute or insidious onset.[12,13] Similar to this case, there were other patients treated for functional psychotic disorders for years before diagnosed as NSy at later stages in our hospital.

The course deteriorated and cognitive impairment became marked as time elapsed. As an etiological or confounding factor, NSy is treatable but it is detected late in the course of illness. The patient was pregnant at her first admission, so this child should also have been investigated for congenital Sy. The family was uncooperative in this aspect, yet the child was described as having "developmental delay", in their own words. It may be stated that hypothyroidism was a comorbid condition which further worsened the clinical picture in our case.

Being detected in the previous hospitalization, it can be considered that her hypothyroid state might have persisted for at least two years.

VDRL has high specificity but low sensitivity in CSF. With no contamination with blood, positive VDRL in CSF indicates NSy; but negative VDRL in CSF does not exclude NSy.[14] FTA-ABS in CSF has less specificity, but when it is negative NSy is excluded.[15] In our case, nontreponemal test may have been false positive related to both pregnancy and autoimmune thyroiditis, besides some other conditions. But NSy is verified with treponemal test in CSF, along with increase in protein levels. CSF glucose and cell count were within the normal range, which although unusual, can occur in the late stages of Sy.[16] There were some limitations in this case; she had no compliance with treatment, no control examination and no detailed investigation of organicity.

Response to treatment is better in young patients with shorter duration of illness and who have pleocytosis in CSF. Dementia and other sequelae of NSy are reported to be reversible with treatment.[17-19] Progressive neuronal degeneration affects reversibility of symptoms in long term. Unsatisfactory clinical improvement in our case may be attributed to the late diagnosis and consequently the late intervention for both organic etiologies.

This case emphasizes the importance of screening for Sy in psychiatric populations. Sy diagnosed in patients in the past, whether they received treatment or not, may relapse. Whenever patients have mental and cognitive disorders, even without neurological symptoms, a lumbar puncture and CSF analysis must be performed regardless of the results of serum analyses for Sy. It is noteworthy that even in a patient treated for schizophrenia for a long time, significant and treatable organic etiologies may be detected. The presence of a psychiatric history should in no way minimize the need for a comprehensive assessment on each admission.

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