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Schizoaffective Disorder Unveiling a Behçet's Disease: A Case Report

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Abstract **Case Report**

Behçet's disease is a chronic and recurrent systemic inflammatory vasculitis that presents in flare-remission phases. Its etiopathogenesis remains unknown. The coexistence of psychiatric symptoms and cognitive impairments appears to be common, yet still unclear. The immuno-inflammatory hypothesis presents a promising approach to unravel the complex link governing this comorbidity. This article presents the case of a patient admitted to a psychiatric hospital to manage behavioral disturbances within the context of a schizoaffective disorder. This admission led to the diagnosis of Behçet's disease with cutaneous and mucosal involvement. The article also provides a literature review on the neuropsychiatric characteristics of Behçet's disease, as well as the bidirectional links between psychiatric disorders and immuno-inflammation.

Keywords: Behçet's disease, neuropsychiatric symptoms, schizophrenia, immuno-psychiatry, autoimmune disease.

INTRODUCTION

The discovery of both structural and functional implications of the immune system on the brain has revolutionized psychiatry, offering new etiopathogenic pathways. Several studies have demonstrated an association between pro-inflammatory cytokines and major psychiatric disorders. This low-grade inflammation has been shown to result from the interplay of environmental factors such as infections, stress, pollution, an unhealthy lifestyle, and genetic immune predisposition [1]. As a result, studies on inflammatory biomarkers in schizophrenia have revealed elevated levels of autoantibodies, cytokines, and other markers of immune system activation [2]. Certain groups of schizophrenia patients exhibit characteristics similar to those observed in autoimmune diseases, such as genetic factors or a clinical profile characterized by a flare-remission course [3]. This hypothesis is supported by the frequent coexistence of autoimmune diseases and schizophrenia [4]. Behçet's disease is a chronic and recurrent systemic inflammatory vasculitis that presents in flare-remission phases. Its etiopathogenesis remains unclear, however, it appears to be mainly vascular, involving an immune-inflammatory mechanism that includes immune complex deposition and leukocyte-mediated effects [5]. Described over 50 years ago, psychiatric manifestations and cognitive impairments appear to be common in Behçet's disease. Anxiety disorders, depressive disorders, and psychotic disorders seem to be the most frequently encountered in this condition [6].

This article presents the case of a patient admitted to a psychiatric hospital to manage behavioral disturbances within the context of a schizoaffective disorder. This admission led to the diagnosis of Behçet's disease with a focus on cutaneous and mucosal involvement and provides a literature review on the neuropsychiatric characteristics of Behçet's disease, as well as the bidirectional links between psychiatric disorders and immune-inflammatory processes.

MATERIAL AND METHODS

A search of relevant literature was performed on 'PubMed' and 'Science Direct' using the following search strings: 'Behçet's disease' and 'psychiatry,' 'neuropsychiatric symptoms,' 'psychiatric disorders,' 'Immuno-psychiatry,' and 'Autoimmune diseases.

CASE REPORT

We present the case of a 31-year-old Moroccan male patient, single, unemployed, admitted to the psychiatric emergency department for management of violent behavior with expression of delusional statements evolving over the past 2 weeks. The medical-surgical history did not reveal any prior medical or surgical conditions. Regarding psychiatric history, there

was irregular treatment adherence for the past 2 years, as well as a history of substance use (tobacco, cannabis). The psychiatric interview indicated a patient with no abnormal psychomotor functioning, with satisfactory self-care and clothing habits. The patient was well-oriented in time and space, conscious, with labile attention, and preserved memory. The speech was accelerated, with tangential thinking. The mood was irritable and the affect was congruent. His thought process was characterized by grandiose and persecutory delusions. The patient reported auditory and visual hallucinations. In terms of instinctual functions, insomnia with reduced sleep needs, decreased appetite, and unexplored sexuality were noted at this stage. Lastly, his judgment was impaired, and his insight was negative.

Based on the clinical presentation and discussions with the patient's surroundings, the diagnosis established was schizoaffective disorder, bipolar type, comorbid with tobacco and cannabis use disorder, according to DSM-5 criteria. Subsequently, an antipsychotic and mood-stabilizing treatment was initiated (Risperidone, extended-release Sodium Valproate).

One week after admission, the patient reported the presence of two genital lesions located on the scrotum (Figure 1), requiring specialized consultation in dermatology and venereology. Dermatological examination of the genital mucosa revealed two painful scrotal ulcers, with a punched-out appearance and a yellowish base, as well as scars from previous lesions. Cutaneously, the patient exhibited non-centrally oriented pustules surrounded by an erythematous halo, distributed on the trunk, thighs, and buttocks, suggestive of pseudofolliculitis. The rest of the clinical examination was unremarkable, particularly no oral aphthae or uveitis were observed. Given the suspicion of Behçet's disease, a skin biopsy, fundoscopy, and whole-body angio-scan were requested. The skin biopsy supported the presence of vasculitis, while the fundoscopy and angiography showed no abnormalities. Subsequently, the patient was referred to internal medicine for specialized consultation, where the diagnosis of Behçet's disease with cutaneous and mucosal involvement was established, and a treatment based on Colchicine was initiated.

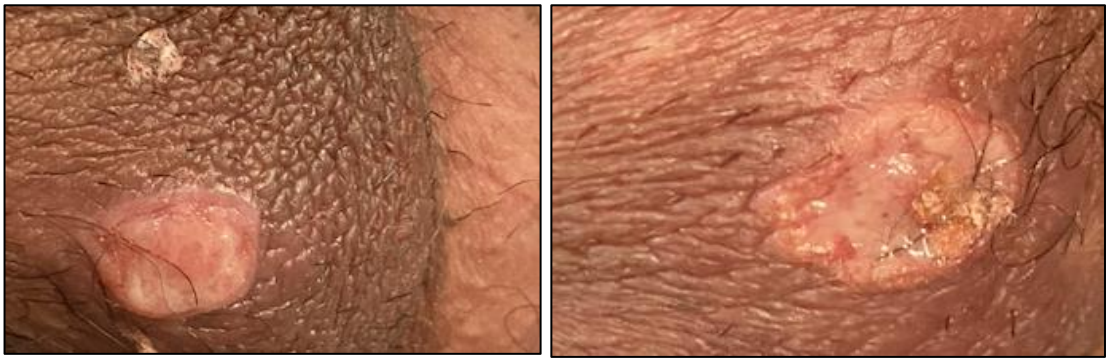

Figure 1: Genital lesions located on the scrotum suggestive of genital aphthosis

DISCUSSION

Through this case report, we have described the coexistence of a schizoaffective disorder and Behçet's disease in a 31-year-old patient.

Behçet's disease is common in Mediterranean countries (80-370 cases/100,000 inhabitants) and East Asia (13.5-20 cases/100,000 inhabitants). It typically begins in young adults and tends to affect males [7]. The coexistence of psychiatric symptoms with Behçet's disease is frequently reported in the literature. However, studies on this topic mainly focus on assessing anxious and depressive symptoms or consist of case reports [8]. In their study, Dursun *et al*., found a psychiatric comorbidity rate of 41.1%, with mood disorders (dominated by major depressive disorder) in 21.9% of cases and anxiety disorders (dominated by generalized anxiety disorder and phobic disorder) in 35.6% of cases. None of the patients in their sample met the criteria for bipolar disorder or schizophrenia [9]. In Talarico *et al*.'s study, the most common psychiatric disorders were bipolar disorder (both type I and type II), major depressive disorder, and insomnia. Compared to other chronic diseases such as systemic lupus erythematosus and hypertension, a diagnosis of bipolar disorder was significantly associated with Behçet's disease, but not depressive disorder or insomnia. Furthermore, the presence of psychiatric symptoms was more frequent during active disease phases [10].

As reported in our article, this observation is also frequently found in the literature and has led to the recognition of a distinct entity known as 'Neuro-Psycho-Behçet,' characterized by symptoms such as euphoria, paranoid delusions, and disinhibition that coincide with flares of this vasculitis. However, the underlying pathogenic mechanism remains unclear, and hypotheses such as the poor quality of life for these patients or the presence of neurological etiologies have been suggested [11]. The autoimmune hypothesis is also being explored. Studies have suggested that patients with active Behçet's disease have higher serum levels of Interleukin-1β (IL-1β), Interleukin-6 (IL-6), and Tumor Necrosis Factor-α

(TNF-α) compared to controls. These pro-inflammatory cytokines could contribute to the emergence of mental disorders by affecting central monoaminergic activity and neuroendocrine processes [12]. In this context, Wang et al. demonstrated that patients with autoimmune diseases have a higher risk of developing schizophrenia, with a risk ratio of 2.44 for autoimmune vasculitis [13]. Indeed, autoimmune diseases could exacerbate psychotic symptoms in the presence of clinical vulnerability to schizophrenia, mediated through pro-inflammatory cytokines activating the tryptophan-kynurenine pathway, which is involved in the regulation of glutamatergic, serotoninergic, and dopaminergic systems (Fig 2) [14, 15].

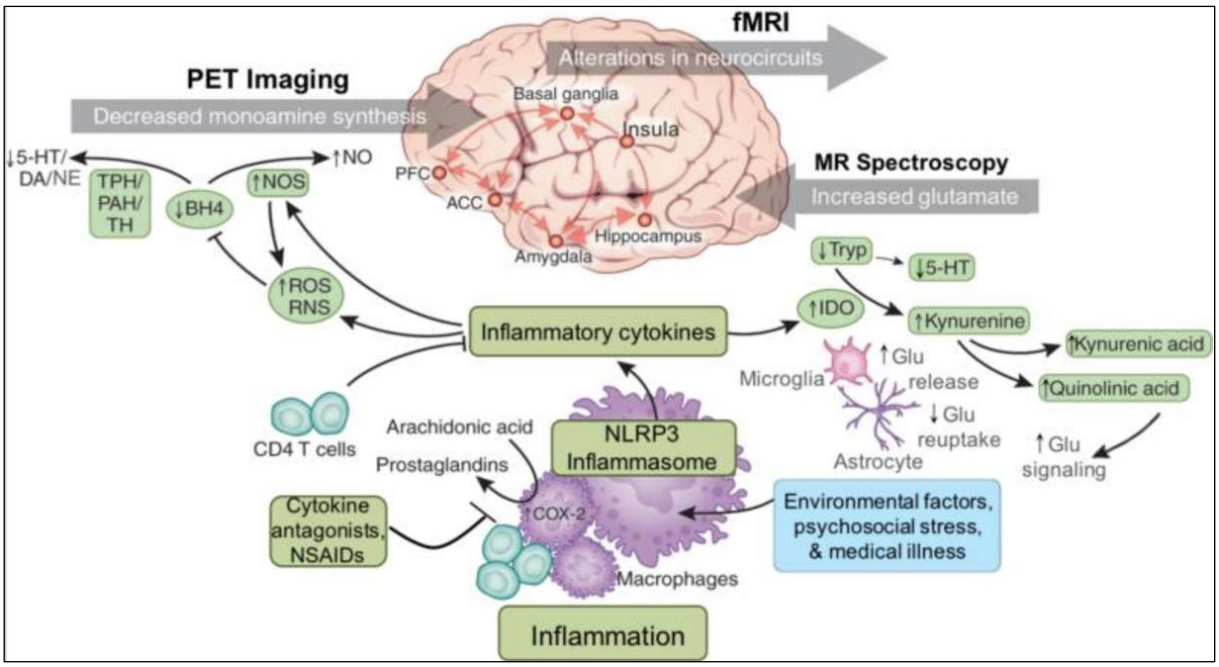

Figure 2: Effect of proinflammatory cytokines on neurotransmitter systems and brain circuits. [15]

Although we were not able to assess the presence of cognitive impairments in our patient, it appears that their occurrence is frequent in Behçet's disease, even in the absence of neurological involvement [16]. In Urbain *et al*.'s study, 50% of patients with Behçet's disease exhibited cognitive impairments. Their presence was linked to disease activity but not to neurological manifestations. The most affected cognitive functions were learning and memory, attention, and semantic fluency [6].

Lastly, based on the literature discussed in this article, Table 1 provides a summary of the common characteristics between Schizophrenia and Behçet's disease.

Table 1: Common characteristics between Schizophrenia and Behçet's disease

Characteristics	Schizophrenia	Behçet's disease
Genetic vulnerability / Familial occurrence	✓	✓
Impact of environmental factors	✓	✓
Immuno-inflammatory pathogenesis	✓	✓
Cyclic flare-remission phases	✓	✓
Cognitive impairment	✓	✓

CONCLUSION

Our study has highlighted the psychiatric comorbidity in Behçet's disease. Despite being frequently reported in the literature, this coexistence remains unclear, and further studies are needed to investigate the underlying pathogenic mechanisms involved in the coexistence of mental disorders and this vasculitis. The immuno-inflammatory hypothesis appears to be a promising approach, and its exploration will help determine whether the psychiatric component is a manifestation of Behçet's disease or not.

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