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Case report

Challenges in diagnosis: exploring comorbidities and differential diagnosis in a young adult with mild autism spectrum disorder and attenuated psychosis syndrome

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SUMMARY

Autism Spectrum Disorder (ASD) is a neurodevelopmental disorder, and its relationship with schizophrenia has been studied since the early 20th century. Several studies have shown a high prevalence of psychotic episodes in ASD, leading many authors to hypothesize that patients with neurodevelopmental disorders may have a substantial vulnerability to psychosis. In this paper, the authors describe the clinical case of a 19-year-old male showing social withdrawal and subthreshold persecutory ideas undergoing his first psychiatric evaluation. The patient´s psychomotor development was unremarkable except for a slight speech delay. He has always exhibited introverted tendencies and became increasingly reserved during adolescence. Today, he experiences significant anxiety around his peers and prefers remaining indoors, spending most of the time playing on his smartphone or online games.
The diagnostic challenge for clinicians lies in distinguishing between co-occurring disorders or determining whether the clinical manifestations are solely due to one of the conditions.

Key words: autism, attenuated psychosis syndrome, comorbidity, schizophrenia, clinical high-risk

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Introduction

Autism spectrum disorder (ASD) is a neurodevelopmental disorder characterized by persistent deficits in social communication and social interaction with restricted and repetitive patterns of behavior, interests, or activities [1]. Its relationship with schizophrenia has been studied for a long time, but there has been a recent resurgence of interest in the scientific community to investigate the connection between the two disorders. The operationalization of the schizophrenic prodrome with the introduction of the Clinical High-Risk for Psychosis (CHR-P) criteria [2], along with the emergence of the Early Identification programs, has opened avenues for investigating the relationship between ASD and psychosis during adolescence [3].

Recent studies show high comorbidity between autism and psychosis, with percentages reaching 34.8% [4,5]. These high rates have prompted numerous researchers to delve into the differences in psychopathological mechanisms in the pathogenesis of delusion [6] and to hypothesize that patients with neurodevelopmental disorders may have a substantial vulnerability to psychosis [7]. ASD and schizophrenia spectrum disorders exhibit shared traits, including referential thinking, constricted affect, odd

speech, eccentric behavior, and limited social interactions [8]. Therefore, ASD patients are likely to exhibit CHR-P trait risk factors. However, longitudinal studies indicate that the severity of autistic symptoms does not influence the development of full-blown psychosis in individuals with ASD and attenuated psychosis syndrome (APS) [9].

It has been demonstrated with clarity that CHR-P patients have autistic traits [3,10]. The North America Prodromal Longitudinal Study (NAPLS 2) highlighted that 2.6% of CHR-P is affected by a neurodevelopmental disorder at baseline [11]. However, CHR-P individuals with ASD do not exhibit a higher risk of converting to psychosis than those without ASD [3].

Recognizing these two comorbid disorders is challenging. And it becomes even more complex for individuals with attenuated psychotic and autistic symptoms [12], mainly when negative symptoms of psychosis occur [4]. The substantial symptom overlap presents clinicians with the challenging diagnostic task of distinguishing between co-occurring disorders or determining whether the clinical manifestations are solely due to one of the conditions.

Case report

P. is a 19-year-old male raised primarily by his mother following the legal separation of his parents in early childhood due to his father's violent behavior. He also has a younger brother who was raised with him. The patient lived with his mother and brother in a residential boarding school during childhood. AAt the age of 10, the family started living in their own apartment.

The patient's psychomotor development was unremarkable except for a slight speech delay. Since early childhood, he exhibited introverted tendencies, often engaging in solitary play and maintaining only a few friends. During middle school, the patient's communication style became markedly more reserved at home and school. He explained that he decided to speak little "to avoid trouble". Notably, he also reported that speaking was always risky because others "might not accept what you say". Since then, he has "chosen" to become silent. During high school, he started to experience significant anxiety due to frequent questioning from his teachers. He did not confide his struggles with his mother until he reached a breaking point and expressed that he could not continue with school because of overwhelming anxiety.

Since then, his life has been characterized by remaining indoors, primarily spending most of his time with his smartphone or online gaming. He has a few friends who occasionally invite him to social events. Generally, he declines invitations if it involves a large group of people. On the contrary, he is more inclined to accept invitations that involve only a small number of friends, typically two or three at most. He has explained that being in a large group of friends makes him uncomfortable.

During the first clinical evaluation, the patient does not express any aspirations for the future and has no plans to return to school or look for a job. There is no apparent indication that the patient experiences distress or discomfort from spending most of his time at home. The patient does not discuss his feelings or sexual life, and he does not express any anger or resentment towards others or his situation. He also refuses to discuss personal topics and avoids answering questions related to his private sphere. He has not pursued pharmacological treatment or sought help for any symptoms of depression, anxiety, stress, or insomnia.

The patient has undergone several evaluation meetings, during which no depressive or anxious symptomatology was observed or reported, except for anxiety in the presence of a large group of friends. An extensive inquiry was dedicated to investigating the patient's social withdrawal and exploring the possibility of negative psychotic-type or ASD symptoms. Furthermore, our attention was directed towards the possible existence of attenuated paranoid symptoms.

For this reason, Structured Interview for Psychosis-Risk Syndromes/Scale of Prodromal Symptom management (SIPS/SOPS) was administered to evaluate the presence of an At-Risk Mental State [13], and Module 4 of The Autism Diagnostic Observation Schedule (ADOS) to assess the autistic symptomatology [14,15].

Below are the ADOS scores:

Language and Communication, score 2 (Conversation: score 1; Descriptive, Conventional, Instrumental, Informational Gestures: score 1); Reciprocal and Social Interaction, score 5 (Facial Expressions Directed to Others: score 1; Quality of Social Overtures: score 1; Amount of Reciprocal Social Communication: score 1; Overall Quality of Rapport: score 2).

The ADOS total score resulting from the sum of Language and Communication plus Reciprocal and Social Interaction was 7 (Autism Spectrum).

The score obtained on the Attenuated Positive Symptom Scale of the SIPS/SOPS assessment was 0, except for the item "Suspiciousness/Persecutory Ideas", which received a score of 3 ("Concerns that people are untrustworthy and/or may harbor ill will. Sense of unease and need for vigilance (often unfocused). Mistrustful. The recurrent (yet unfounded) sense that people might be thinking or saying negative things about the person"). The diagnostic main pivotal point was related to the differentiation between autistic social withdrawal and the presence of negative symptoms. The patient's longstanding difficulties in his relationships, which date back to childhood, prompted us to the presence of mild ASD alongside APS.

At some point, the patient started to interpret these difficulties in a paranoid manner, which obscured the underlying deficit in social interactions. This was particularly evident when he expressed the belief that it was better to "speak little to avoid risks". Additionally, it is notable that the patient appears undisturbed from his social withdrawal and does not report any distress or dissatisfaction with his isolation. This is consistent with the core features of ASD.

Taking into consideration the combined clinical picture and the mild burden of subjective distress, we did not initiate any antipsychotic medications. Considering also the partial efficacy of antipsychotics in APS and the potential risk of exacerbating social withdrawal with first-generation antipsychotics, a psychological intervention was offered.

Conclusions

This clinical case highlights the challenge of differentiating between borderline cases where sub-threshold psychotic symptoms and mild autistic traits coexist and determining the primary disorder. Despite the high heterogeneity, individuals with prodromal psychosis and ASD (CHR/ASD+) are generally characterized by some sociodemographic baseline features as being males, younger than CHR without ASD (CHR/ASD-) [3], predominantly presenting with attenuated psychotic symptoms (up to 100%), and experiencing impairments in social cognition, social functioning, and global functioning [16]. P. matches all these characteristics.

Moreover, the challenge of differentiating between autistic symptoms and sub-threshold negative symptoms is even more complex, and it highlights the necessity for specialized diagnostic tools to aid in accurate diagnosis. Borderline cases with comorbid sub-threshold psychotic symptoms and mild autistic traits are becoming more and more common in clinical practice, emphasizing the importance of a comprehensive understanding of psychopathology for an accurate diagnosis. In this sense, further qualitative investigation of the subjective experience in youth may represent a valuable next step in achieving greater diagnostic accuracy.

Further research on this topic could lead to a better understanding of the etiopathogenetic mechanisms of the two disorders and pave the way for the identification of new and more accurate diagnostics and therapeutic interventions [17].

Conflict of interest statement

The authors declare no conflict of interest.

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Authors' contributions

FFN, EE, and MR contributed to the clinical observation; FFN and EE made the bibliographic research and wrote the first draft of the manuscript; GDL and MR supervised the manuscript; all the Authors reviewed and approved the final version.

Ethical consideration

The research was conducted ethically, with all study procedures being performed by the 2013 World Medical Association's Declaration of Helsinki requirements. Written informed consent was obtained from the patient for study participation and data publication.

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