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Case report

Navigating the intersection between autism spectrum disorder and bipolar disorder: a case study

Eleonora Esposto[1,*], Federico Fiori Nastro[1,*], Giorgio Di Lorenzo[1,2], Michele Ribolsi[3]

[1] Department of Systems Medicine, Tor VergataUniversity of Rome, Rome, Italy; [2] IRCCS-Fondazione Santa Lucia, Rome, Italy; [3] Unit of Neurology, Neurophysiology, Neurobiology and Psychiatry, Department of Medicine, University Campus Bio-Medico of Rome, Rome, Italy
[*] These authors equally contributed

SUMMARY

Autism spectrum disorder (ASD) is a neurodevelopmental disorder that affects social communications and behavioral routines. ASD frequently occurs in comorbidity with bipolar disorder (BP). Due to its atypical presentation, mostly with exacerbation of core ASD features, BP poses significant diagnostic challenges. Treatment usually consists of a combination of mood stabilizers and atypical neuroleptics. Although most authors support this treatment concept, it is based on low-quality evidence.

In this clinical case, we report on a 25-year-old male patient with ASD and recurrent manic episodes treated with a combination therapy of titrated mood stabilizers (lithium and valproic acid) and atypical neuroleptic drugs (olanzapine and chlorpromazine). Following this treatment regimen, the patient's manic episodes subsided.

Key words: autism, bipolar disorder, comorbidity, mood disorder, stereotypy

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Correspondence
Giorgio Di Lorenzo
Department of Systems Medicine, Tor Vergata University of Rome, Rome, Italy
E-mail: di.lorenzo@med.uniroma2.it

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Introduction

Autism spectrum disorder (ASD) is a lifelong neurodevelopmental disorder with a deficiency in social communication skills and a display of obsessive and ritualistic behavioral routines as its core features [1]. Approximately 1% of children worldwide are diagnosed with ASD, and its prevalence has increased over the years [2]. ASD is now recognized as a heterogenous disorder with a broad spectrum from mild to severe, and most need life-long support. Often the diagnosis is complicated due to the age of symptom debut and its diverse symptomatology [3]. Alongside its core features, many patients with ASD also experience various psychiatric conditions [4-8].

Bipolar disorder (BP) is a heterogenous mood disorder characterized by manic and hypomanic episodes alternating with depressive phases. During the manic phase, patients become hyperactive, have a perceived decreasing need for sleep, have an exaggerated sense of well-being, and have poor decision-making with excessive spending and taking sexual risks [9]. The prevalence of BP in ASD is around 7%, higher than that of the standard population [10]. However, the manifestation of mania tends to differ, typically with exacerbation of core ASD features, resulting in diagnostic difficulties [11]. Due to poor verbal communications skills and limited emotional expressiveness, exaggerated symptoms of ASD may mask affective symptoms from BP, and vice-versa; hyperactivity, agitation, irritation, and insomnia might be misread as BP [4,12-15]. Not only do we lack validated diagnostic tools to distinguish manic episodes from core ASD features, but

there are also insufficient high-quality data on effective pharmacological therapy for manic episodes in patients with ASD. Most authors support the use of mood stabilizers such as lithium carbonate, valproic acid, and atypical neuroleptics [16,17].

We present a clinical case of a patient with ASD with recurrent manic episodes and highlight its atypical symptomatic presentation and the use of mood stabilizers for symptomatic control.

Case report

T. is a 25-year-old male, the eldest of two siblings. He was diagnosed with ASD at the age of 3. His symptoms included psychomotor delay, particularly in language development, deficits in social interaction, poor eye contact, and motor and verbal stereotypies. He underwent intensive psychomotor therapy, speech therapy, and the Applied Behavioral Analysis (ABA) program, which allowed him to make significant progress in motor abilities and social competencies. At 7, he developed age-appropriate language skills and improved his communication skills. Overall, the severity level of the autistic symptoms is moderate/severe with mild intellectual disability (IQ: 70). At the age of 18, T. still exhibited motor and verbal stereotypies and difficulty in understanding the mental states of others, but he was able to graduate from high school successfully.

At 19, he began to suffer from recurrent manic episodes. During these manic episodes, T. was more talkative than usual, tended to scream to communicate, and began to sing loudly, refusing to stop; notably, he also reduced his hours of sleep at night and was easily irritable. Moreover, his motor stereotypies increased. He began to walk back and forth in the room, stopped at the doorway before leaving a room, and began to move his arms synchronously and repetitively. In addition to singing, he made repetitive noises until he lost his voice. The clinical presentations of these manic episodes were mainly characterized by three fundamental clinical features: an increase in verbal production, insomnia, and an increase in motor and verbal stereotypies. Pharmacological therapy with titration of valproic acid up to 900 mg/day and olanzapine 5 mg/day was started, progressively improving his psychopathological condition.

The first manic episode lasted about two months. His second manic episode recurred at the age of 22, and his third one at the age of 25. In his latest occurrence, it was necessary to add lithium carbonate, titrated up to 900 mg/day to stabilize the mood alterations and solve the manic episode; and chlorpromazine 25 mg at night was added to treat his sleep disturbances.

Conclusions

This clinical case study highlights the relationship between motor and verbal stereotypies and mood tone alterations in individuals with ASD, highlighting the challenges associated with diagnosing manic episodes in this population due to atypical presentations. As described by Mantenuto and colleagues [18], the clinical and subclinical psychopathological heterogeneity observed among individuals with ASD means that an undetected ASD diagnosis may lie beneath an apparent mood disorder.

Emotional dysregulation is a prominent feature of BD, and neuroimaging studies have identified patterns of brain activity changes in regions implicated in emotion processing in mood alteration episodes and euthymic phases, as well as in subjects at risk for the disorder [19]. However, the relationship between BD and emotional dysregulation remains poorly understood [20].

On the other hand, the link between emotion regulation, social interaction, and different types of restricted and repetitive behaviors (RRBs) in ASD has been proven [21,22]. Researchers have shown that RRBs are often associated with broader negative emotional states [23] and that ASD individuals with better emotion regulation tend to engage in fewer RRBs.

It could be hypothesized that in the case of T., stereotypies and repetitive behaviors, which are already more frequent in ASD individuals with cognitive impairments, were exacerbated by emotional dysregulation during manic episodes. The heightened degree of psychomotor excitement does not result in goal-directed behaviors, such as excessive spending, which we would expect in a neurotypical BD, but in increased autistic RRBs.

During his manic episodes, T had increased verbal production and greater psychomotor agitation associated with increased stereotypies. Both mood stabilizers (valproic acid and lithium) and antipsychotics (olanzapine and chlorpromazine) did not modify the stereotypies but contributed to the remission of the manic episodes in the patient. Although there are no specific medications for stereotypies, treating comorbid mood disorders improve the control of the symptoms [24].

In conclusion, diagnosing manic episodes in ASD remains challenging due to its atypical presentation. We still lack validated diagnostic tools, and our treatment regimens are based on low-quality studies [25]. Misdiagnosis can lead to wrong treatment, such as with antidepressant drugs that may potentially trigger a manic episode in patients with ASD [26]. Nevertheless, most authors suggest the use of atypical neuroleptics and mood stabilizers. Lithium might be considered a first option.

Conflict of interest statement

The authors declare no conflict of interest.

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Authors' contributions

EE, FFN, and MR contributed to the clinical observation; EE and FFN 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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