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Case Report

Diagnostic and therapeutic challenges in autism spectrum disorder with comorbid bipolar disorder

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ABSTRACT

Autism spectrum disorder (ASD) is frequently associated with a variety of psychiatric comorbidities. Bipolar disorder (BD) is a mood disorder associated with ASD. The diagnosis and treatment of BD in the background of ASD presents unique difficulties in management of the patient in both diagnosis and management. Overlapping symptoms, inadequate communication of patient history and pharmacological limitations compromises treatment success. The paper discusses an adolescent male with ASD and complexities faced in diagnosing and treating secondary BD It showcases a 16 year old male with ASD with acute aggression, suicidal ideation, and severe school refusal. He was initially given a diagnosis of DMDD and GAD. His symptoms proceeded to a manic episode and a revised diagnosis of bipolar I disorder. Backed by strict parental monitoring and multidisciplinary school tracking, the patient achieved complete mood stabilization and extreme treatment compliance. The diagnostic process in the ASD-BD population is hindered by the lack of communication in history taking, masking of symptoms. Pharmacological management is complicated due to sensitivity to adverse events and limited treatment options. The comorbid ASD and BD require a highly targeted, multidisciplinary approach. There is a need for ASD specific diagnostic tools and specialized guidelines to prevent misdiagnosis and polypharmacy. The stabilization is achievable and requires tracking and tailored pharmacological strategy for optimal treatment.

Keywords: Autism spectrum disorder, Bipolar disorder, Comorbidity, Diagnostic overshadowing, Mania, Pharmacotherapy

INTRODUCTION

Autism spectrum disorder (ASD) is a neurodevelopmental disorder characterized by deficits in social communication and patterns of behaviours which are restricted and repeated.[1] The main clinical features are significant deficits in social interaction with lack of emotional reciprocity and understanding social cues, lack of nonverbal communication through eyes or hand and gesturing thus the patients of ASD find difficulty in forming and maintaining relationships and friendships. Moreover, there are restricted and repetitive behaviours like stereotyped motor movements, rigid daily routine, fixed interests, and variable reaction to a stimulus.[1] About 1 in 31 (3.2%) children aged 8 years have been identified with ASD.[2] It is reported to occur in all racial, ethnic, and

socioeconomic groups. ASD is over 3 times more common among boys than among girls.[2] Patients suffering from ASD have a higher incidence of other neuropsychiatric conditions such as ADHD, unipolar and bipolar depression, anxiety and schizophrenia and thus require a deeper understanding into treatment of comorbid psychiatric conditions.[3]

Patients suffering from BD shift between states of intense highs in mood, behaviour and energy levels (manic/hypomanic episodes) to intense lows (depressive episodes). During manic episodes, the patient might feel immensely happy, joyful, excited, irritable and easily distracted coupled with unusual behaviour where the patient becomes more active and talkative. The patient might present decreased need for sleep, act rudely, engage in dangerous behaviours and lose social inhibitions. Whereas during the depressive episodes, the patient might feel down, upset, tired, uninterested or even suicidal.[1] BD usually first appears in late adolescence to early adulthood and renders significant impairment in emotional regulation, behaviour, thinking and functioning. The global incidence of BDs amongst adolescents and young adults has been on a rise from 79.21 per 100000 in the year 1990 to 84.97 per 100000 in 2019.[4] In the past 3 decades there has been an increase in prevalence, incidence and YLD for BD, the highest increase in prevalence was found to be in the early adulthood period (20-24 years age group).[14]

Comorbidity is defined as a distinct clinical entity that has existed or may occur during a patient's clinical course who has the index disease under study.[5] Presence of comorbid disease can often complicate, interfere with, or make the treatment of the index disease more difficult, making the consequences of the condition and its prognosis worse.[6] Various studies have found a significant rate of co-occurring psychiatric disorders in the autism spectrum with recent estimates stating that more than 91% of children/adolescents and 31% of young adults to be suffering from comorbid psychiatric diseases.[7] Various studies have found significant challenges on multiple levels in diagnosis and treatment of comorbid psychiatric conditions. The major issues faced by the clinicians in diagnosing such cases are attributed to the difficulty in classifying the symptoms due to the overlap in the features of given comorbid conditions, getting appropriate behavioural history from such patients due to presence of language impairments and intellectual disabilities.[8] There also exists a lack of optimal instruments and ways for measuring treatment response for co-occurring psychiatric conditions.[9,10]

Psychiatrists often prescribe psychoactive medications to treat BD but the patients of ASD have an increased sensitivity to these medications. For example, lithium is one of the most widely used medications; unfortunately, it is not free of risk of severe adverse effects. They can include thirst, excessive drinking and bed wetting, shaky hands and even life-threatening toxicity. This is particularly concerning in individuals who have communication difficulties, as they may not be able to raise the alert on the side effects they're experiencing. Similarly, antidepressants and stimulants may precipitate manic symptoms or worsen the irritability and behaviour dysregulation.[11] Currently, the only drugs approved by the U. S. Food and Drug Administration (FDA) specifically for autism-related irritability are Risperidone and Aripiprazole. These antipsychotics are prescribed to children aged 5 to 16 (Risperidone) and 6 to 17 (Aripiprazole) to help reduce aggressive behaviors, irritability, and self-injurious actions, of course they are not without risk of adverse effects.[12]

Thus, here we present a case of a 16 year old male "Moe" with concurrent diagnosis of bipolar and ASD and present the complexities faced in managing a patient with such a comorbid condition.

CASE REPORT

A 16 year old male "Moe" was referred to an urban community psychiatric clinic in New York (USA) by a local high school for sudden, drastic changes in emotional regulation and severe school refusal. Moe was a known case of ASD of level 2 with reduced communication skills and rigid behaviours. Moe had an event of aggressive and irritable behaviour along with suicidal ideation 2 weeks before the visit in the form of yelling and screaming and was taken to the emergency room of a nearby hospital 50mg subcutaneous injection of Risperidone (UZEDY®) was administered in the emergency room. A diagnosis of generalized anxiety disorder (GAD) along with disrupted mood dysregulation disorder (DMDD) was put up by the hospital psychiatry consult and he was initially prescribed (Risperidal®) 0.5 mg orally along with escitalopram (Lexapro®) 10 mg-once a day for his mood symptoms and Clonazepam (Klonopin®) 0.5 mg-once a day. However, Moe refused to take the oral risperidone, so a parental consent was taken and subcutaneous Risperidone (UZEDY®) 50 mg was given.

In the first visit to the clinic, Moe's father complained about severe school refusal and an uncontrolled mood where Moe tried to run away from the house. Moe's father also reported decreased sleep in the form of staying up till late, aggressive and irritable behaviour in the form of yelling and screaming, pursuing new sexual experiences and thoughts about changing his hairstyle and impulsive shopping lasting for more than a week. Moe had an occurrence of weird sensations on private parts, dizziness and writhing pain. The episode was understood to be a manic episode and the clinical suspicion was moved towards bipolar I disorder and Lamotrigine (Lamictal®) 25 mg twice a day as a mood stabilizer, and the Risperidone long-acting injection was continued monthly. The patient was feeling internally restless and a diagnosis of akathisia was established. Benztropine (Cogentin®) 0.5 mg was added twice daily to address the akathisia.

In the next visit, a month later the patient had significant improvement in symptoms with resolved akathisia and sensations. However, the manic symptoms had started to return since last week. This return of symptoms was found to be due to noncompliance of the monthly Risperidone. The Risperidal was then subsequently changed to a daily tablet of 1mg at night. Other medications were continued as previously indicated. The patient's father was explained about the care plan and the "warning signs" associated with the existence of such comorbid pathologies, including potential side effects of the medications prescribed and the need for ensuring compliance to medication. Moreover, the father was instructed to co-ordinate with therapists and school authorities to monitor the progress and track behaviour using checklists to ensure optimal treatment results. In the latest consultation, the patient was tolerating the medication well and had improvement in the mood along with a stern compliance to the medication with no active complaints.

DISCUSSION

ASD is associated with a variety of different comorbid psychiatric conditions and rarely exists as a singular diagnosis. It is associated with ADHD (28%), anxiety disorders (20%), personality disorders (12.6%) and mood disorders like depression and BD (11%).[13] The patients of ASD require a highly structured and personalized care approach for treatment of these above-mentioned comorbid conditions and lack of such specific tools leads to lack of optimal care in terms of delayed or missed diagnosis, frequent medication changes, frequent medication changes and polypharmacy.[14]

The patient presented with behaviour attributable to ASD, which was characterized by profound deficits in social and emotional reciprocity. There was a lack of non-verbal signaling in the form of failure to maintain and modulate eye contact which created a barrier in establishing the therapeutic rapport. This lack of non-verbal signaling disrupted the natural flow of communication, posing a difficult scenario for the clinician to gauge the patient's internal state through classical interview techniques. The case comprises an inherent difficulty in identifying and accurately diagnosing BD, due in part to the diagnostic criteria for mania often relying on observable changes in social behaviour and energy, the baseline social challenge associated with ASD obscured the onset of manic mood episodes.[15] The acute anxiety and irritability on the patient's first visit to the clinic were attributed to being a part of the emotional dysregulation associated with ASD, the behaviour of the patient was viewed as sensory overload and the behavioural patterns common to ASD.[16] Lithium is one of the most widely used medications; but unfortunately, lithium often produces significant side effects in patients of ASD, as mentioned before. Moreover, only Risperidone and Apiprazole are USFDA approved treatments for irritability associated with ASD in the youth population.[17,18] The patient's relapse after missing Risperidone injection confirms its necessity to manage manic symptoms.

The current condition of the patient with no active complaints, an adequate compliance to the medication and the behavioral monitoring signifies adequate management of the patient. Moreover, the regular monitoring of behavior and mood in various different settings and increased targeted approach for the patient ensures adequate treatment response.

CONCLUSION

ASD is a neurodevelopmental disorder associated with various comorbid psychiatric conditions. Moe's case illustrates the challenges faced in diagnosis and treatment of comorbid BD in a patient with ASD. The core challenge lies in the diagnostic overlap and overshadowing of symptoms created by ASD, the barrier due to hindered verbal and nonverbal communication and limitations in prescribing pharmacological agents which are safe and effective in the background with ASD. The findings of the case emphasize on the fact that even though a large population of patients of ASD suffer from comorbid psychiatric conditions, there is a lack of ASD specific tools to diagnose various comorbid psychiatric conditions. Moreover, there is a lack of guidelines and approved pharmacological treatment options for the comorbidities seen with ASD. The case emphasizes on the need for tailor made diagnostic and treatment regimens for the comorbid conditions occurring with ASD.

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