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Case report

Suicide crisis unveils an autism spectrum delayed diagnosis: a case report of an adult male

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SUMMARY

Autism is a lifelong neurodevelopmental condition consisting of difficulties in social communication, adapting to unexpected change, heightened sensory sensitivity, and restricted interests.

Several studies demonstrated a significantly higher suicide risk when comparing individuals on the autism spectrum with the general population. Many patients remain undiagnosed, further increasing the risk of suicide attempts (lifetime prevalence of suicidal ideation in adults on the autism spectrum ranges between 19.7% and 66%, and suicide attempts between 1.8% and 36%, the highest prevalence estimates being in late-diagnosed adults).

The authors describe in detail the clinical case of a 48-year-old man who, in relation to his illness and, subsequently, to his mother's death, showed feelings of sadness and despair and attempted anti-conservative through the inappropriate ingestion of drugs. Following the diagnosis of autism spectrum disorder and by virtue of compliance with the proposed pharmacological therapy, an improvement in the psychopathological picture was observed with consequent criticism of the anti-conservative gesture. The psychopathological implications of this co-occurrence are discussed.

Key words: Autism Spectrum Disorders, suicide, diagnosis

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Introduction

Autism spectrum disorders (ASDs) represent a group of neurodevelopmental conditions with a common genetic substrate consisting of life-lasting impairment in social communication, repetitive and stereotyped behavior, and restricted interests [1]. ASD diagnosis requires the accomplishment of DSM-5 criteria defined as persistent deficits in each of the three areas of communication and social interaction and at least two of the four types of restricted and repetitive behaviors[1]. Recent studies underlined that treatment in countries with high socio-demographic index (SDI) should be improved, considering the increasing prevalence of the disorder, with almost 0,6 % of people affected worldwide [2]. However, the diagnosis of ASD is often complex, considering the heterogeneity of clinical and subclinical expressions across individuals. A population-based study conducted in the United Kingdom to establish the true prevalence of autism, which included those with previously unknown or undiagnosed autism, found that nearly 1.1 percent of the general British adult population met the criteria for a formal diagnosis of autism [3]. In fact, ASD rarely occurs in its pure form and is quite heterogeneous in its clinical and subclinical manifestations [4]. This evidence, added to a general lack of knowledge about the availability of autism diagnostic services, makes formal diagno-

sis difficult and often delayed[2]. Therefore, many adults with elevated autistic traits, especially women, are not diagnosed, although they may fulfill the criteria for a diagnosis of autism [2]. Individuals suffering from ASD are more likely to have a comorbid psychiatric disorder that may even worsen the clinical presentation of the disease, contributing to increased suicide mortality [4-7]. Autism and autistic traits are over-represented in groups at risk for suicide [4,8] and a recent meta-analysis reported the prevalence of suicidal ideation and attempts in ASD, ranging from 10.9% to 66% and 1% to 35%, respectively[9]. Self-reported autistic traits in those without autism diagnoses are also associated with an increased risk of suicidal thoughts and behaviours [10,11,] and the highest prevalence of suicide behavior is estimated to be in late-diagnosed adults [11]. Thereby, not surprisingly, autistic traits and diagnosis are becoming a central component in suicidality theories and clinical assessment of suicide risk [11]. The suicidal mind often operates dichotomously, and sudden changes, stressful situations, and the loss of caregivers, in the context of the cognitive rigidity typical of ASD, can lead to feeling trapped and experiencing feelings of hopelessness, seeing suicide as the only solution [12]. In addition, individuals with ASD, both diagnosed and undiagnosed, are significantly far more likely to impulsively attempt suicide without a plan during a crisis, increasing the likelihood of death by suicide [13]. Interestingly, a recent study in England showed a higher percentage of possible undiagnosed autism in people who died by suicide [14]. Thus, there is considerable interest in looking for autistic traits or undiagnosed autism in those who attempted suicide, as well as describing the process that led to deliberately attempting to take their own lives. The following case illustrates the path that led to a suicide crisis in an adult man, which eventually unveiled an undiagnosed ASD.

Case report

We hereby report the case of Mr. D, a 48-year-old man that was hospitalized in the Psychiatric ward of "San Salvatore" Hospital in L'Aquila (Italy) after a suicide attempt caused by a prescription drugs overdose in February 2022nd. He didn't report previous contacts with psychiatric services. On the 7th of February 2022, Mr. D. arrived in the Emergency Room (ER) accompanied by ambulance operators following the ingestion of 14 tablets of candesartan cilexetil/hydrochlorothiazide, which was prescribed to his elderly mother, with whom he was living at the time. Just before his hospitalization, his mother suffered a traumatic femur fracture and was transferred to a hospital outside the city of L'Aquila because of a lack of beds availability. Such episode generated Mr. D's growing feelings of concern and of mistrust in his own autonomy, as well as in his ability to take care of his mother once she was discharged. Moreover, the belief that his sister, the mother of two autistic children, could not contribute to the day-to-day management of the patient and his convalescent mother exacerbated his feelings of hopelessness. He reported how these thoughts led him to suicidal ideation and eventually to the attempt. In the ER, he underwent a psychiatric evaluation, and the patient appeared sad, congruently with the thought content expressed during the interview. He held the interlocutor's gaze with difficulty. His speech was mostly composed of short answers to the question asked and expressed with soft, monotone volume. The thought form was corrected. He manifested feelings of sadness, hopelessness, and helplessness, along with anxiety and somatization. In his past medical history, he reported meningitis at the age of one year and a half, hydrocephalus treated with a peritoneal shunt in 1978 and with third-ventriculocisternostomy in 2005, dolichocolon and hiatal hernia. In family history, he had two nephews (sons of his sister) affected by the autism spectrum. Once he was transferred to the psychiatry ward, a collection of information regarding the patient's life history was performed. He obtained his Classical High School diploma with good results. The caregiver reports skills in mathematics, which motivated him to enroll first in the Faculty of Economics, then in the Faculty of Mathematics and Physics, although he never graduated from either course because of the onset of a significant sense of inadequacy. He only worked for a short period at a post office, resigning after a short period of time. At the time of hospitalization, he was unemployed. He reported no friendships or sentimental relationships during his lifetime. After a few days of washout and electrolyte monitoring, and once the organic frame was stable, psychotropic therapy was introduced, starting with sertraline 50 mg/day and mirtazapine 30 mg/day. Although the patient seemed to partially criticize the anti-conservative gesture, he expressed feelings of sadness, along with a depressed mood, anxiety, and difficulty sleeping. During hospitalization, the patient presented stereotypies, absent interest in socializing, seemed to hesitate to make eye contact with the interlocutor, and often engaged in soliloquy; moreover, he often reported great or unproportioned levels of anxiety and irritability when facing changes occurring in the context of the hospitalization (for example, being transferred from a room to another when a new patient arrived) and tended to reject the possibility of continuing treatment in a post-acute-care facility, mostly because of the difficulty of sharing spaces. After a few days of hospitalization, olanzapine 5 mg/day was inserted into the therapeutic scheme, and sertraline was increased to 100 mg/day. The phar-

macotherapeutic strategy has been set according to an accurate rationale: olanzapine may reduce the risk of suicidal behavior 15 and can also be employed to treat maladaptive behaviors commonly associated with ASDs [16]; sertraline is effective in treating repetitive behaviors, anxiety, and irritability/agitation; finally, mirtazapine was chosen to improve the patient's sleep [17]. After 17 days of hospitalization, the patient was discharged with the diagnosis "unspecified mood disorder; autism spectrum disorder" and with the following psychotropic therapy: Sertraline 100 mg/day; Olanzapine 5 mg/day; Mirtazapine 30 mg/day. Following his discharge from the hospital, he was followed by the Mental Health Center (*Centro di Salute Mentale*) of L'Aquila. When observed outside the context of acute disease, the patient continued to be critical of the suicidal behavior and showed an improvement in mood and a reduction in anxiety levels, although keeping on manifesting concerns for his mother's health. In May 2022, after the death of Mr. D's mother, he grieved – in adequate times and ways, and suicidal ideation did not reappear in this phase. He proved himself independent in taking care of himself and his household and was able to drive his car (benefiting from a special license) on short journeys, which allowed him to make purchases. Nevertheless, although the resolution of the depressive symptomatology, behaviors observed during hospitalization, such as stereotypies, disinterest in social interactions, and rigidity in one's routine, persisted in frequency and intensity. Furthermore, it was possible to observe the narrowness of his interests, as he declared to spend all his free time exclusively watching films. In light of these observations, he underwent a diagnostic evaluation at the Regional Center for Autism for diagnostic confirmation. The clinical and neuropsychological evaluation employed the following tools: Wechsler Adult Intelligence Scale - Fourth Edition (WAIS-IV) for intellectual evaluation; Eyes Task and Social Intelligence Battery for Assessing Social Cognition; Autism Diagnostic Observation Schedule-Second Edition (ADOS-2) and Autism Spectrum Quotient (AQ) for clinical and symptom assessment. In WAIS-IV, his total IQ score was 111, indicating medium-high intellectual functioning; in Eyes Task, he obtained 20/36 (a normal performance, z=-0,38); in EQ-10, the score was 4/20, indicating poor empathic abilities; Social Intelligence Battery for Assessing Social Cognition including Theory of Mind Test (ToM: score 11/13 with a cut-off ≥12), Emotion Attribution Test (the patient struggled in recognition of happiness, fear, and anger), Test of Social Situations (he has some difficulties in identifying regulatory behavior but correctly recognizes violations and their seriousness) and Moral/Conventional Distinction Test (which reported good skills in the understanding non-permitted and unregulated moral and conventional behaviors). In module 4 of ADOS-2, he scored: 5 in Communication area, 12 in Social Interaction area (total score 17), a score of 2 in Imagination/Creativity area, and 0 in Stereotyped Behaviors and Narrow Interests area (total score 17). Cut-off scores for a diagnosis of an ASD in ADOS-2 are 3 in communication, 6 in Social Interaction, and 10 in Communication + Social Interaction. In AQ, he obtained a score of 22, which means that he does not achieve the score of 32 necessary to identify clinically significant levels of autistic traits, but he has self-reported traits typical of the autism spectrum. In conclusion, the final diagnosis was of "autism spectrum disorder" (299.00, F84.0, DSM-5, 2013) Level 1. At the time being, he is following a therapeutic scheme with Sertraline 100 mg/day, Olanzapine 10 mg/day, and Mirtazapine 30 mg/day. Mr. D is currently living alone, although supported by his sister. He is independent and autonomous; he reports euthymic mood and low or not significant anxiety levels. The pharmacological therapy seems to be effective and well tolerated, as the patient takes it autonomously with regularity and constancy without reporting side effects. In March 2023, he also started psychotherapy and was included in a program dedicated to the management of patients with autism spectrum diagnosis. Currently, the patient categorically denies suicidal ideation or intent and, if questioned about it, continues to be critical of the act that led him to the hospitalization.

Conclusion

As this case illustrates, the diagnosis of ASD in adults is difficult but crucial. Although many adults with ASD may have mild symptoms or may never have had contact with psychiatric Services, recognition and treatment of the disorder can greatly improve their lives. There may be life events that cause a high risk of crisis in these patients, such as the loss of caregivers or important changes in their daily life. It's important for these patients to make a thorough history assessment and a detailed clinical evaluation, followed by neuropsychological tests and scales for diagnostic confirmation. This report also confirms that depressive symptoms and suicidality are common comorbidities in patients with ASD. This underlies the necessity for adequate screening of comorbid major depression and suicidal ideation in this group of patients. After the diagnosis and multidisciplinary treatment for his disorder, Mr. D. now has a better quality of life: he is able to live alone, he has good autonomy, his mood is not deflected, and his anxiety levels are not significant. Further awareness and study, however, are needed to help clinicians enable adults with ASD to reach their full potential.

Conflict of interest statement
The Authors declare no conflict of interest.

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Authors' contributions
Both Authors contributed to the clinical observation, the writing of the paper and the bibliographic research.

Ethical consideration
The research was conducted ethically, with all study procedures being performed in accordance with the requirements of the World Medical Association's Declaration of Helsinki. Written informed consent was obtained from each partic-ipant/patient for study participation and data publication.

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