DOI: https://doi.org/10.17816/nb677141 EDN: QMELLK

Quasipsychotic Phenomena in Autism Spectrum Disorde

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ABSTRACT

This article presents a diagnostically ambiguous clinical case of a patient, Yakov, who had been classified as disabled since childhood due to a diagnosis of childhood-onset schizophrenia with an oligophrenic-like defect. Since the age of 3 years, he has been repeatedly hospitalized in psychiatric facilities and received antipsychotic therapy. However, during a specialized psychiatric assessment at the age of 23 years, the diagnosis of schizophrenia was not confirmed, as the observed psychopathological symptoms did not align with the diagnostic criteria. The initial diagnosis of childhood schizophrenia had been based on a misinterpretation of behavioral disturbances and symptoms of emotional-volitional deficit: from early childhood, the patient exhibited low sociability, social withdrawal, lack of initiative, emotional flatness, and a tendency toward unusual behaviors, along with developmental delays in cognition and speech. Later, his intellectual and speech delays eventually resolved, but behavioral peculiarities, communication difficulties, infantilism, and a tendency to fantasize and live in an imagined reality persisted. No clear signs of positive psychotic symptoms were observed. At the time of assessment at the age of 23 years, communicative difficulties, autistic traits, and speech disorders characteristic of autism spectrum disorder remained predominant, which led to a revised diagnosis of autism spectrum disorder instead of schizophrenia. Attention is drawn to the fact that the symptoms observed in the patient—previously regarded as delusional, hallucinatory, or indicative of disorganized and incoherent thinking—could be interpreted as quasipsychotic, associated with impaired cognitive information processing rather than true psychosis. The published data were analyzed, and the attention of colleagues was drawn to the issue of overdiagnosis of schizophrenia and disregarding the possibility of similar symptoms related to autism spectrum disorders.

Keywords: autism spectrum disorders; schizophrenia; schizophreniform psychosis; quasipsychotic disorders.

To cite this article:
Mendelevich VD, Nesterina MK, Konovalova VN. Quasipsychotic Phenomena in Autism Spectrum Disorders. *Neurology Bulletin.* 2025;57(2):100–112. DOI: 10.17816/nb677141 EDN: QMELLK

Submitted: 13.03.2025 **Accepted:** 08.04.2025 **Published online:** 25.05.2025

DOI: https://doi.org/10.17816/nb677141 EDN: QMELLK

Квазипсихотические феномены при расстройствах аутистического спектра

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АННОТАЦИЯ

В статье приведён диагностически неоднозначный клинический случай пациента Якова, инвалида с детства по шизофрении (детский тип, олигофреноподобный дефект), который с трёхлетнего возраста неоднократно госпитализировался в психиатрические стационары, проходил антипсихотическую терапию. При специальном обследовании в возрасте 23 лет диагноз «шизофрения» не подтвердился, поскольку не соответствовал наблюдавшейся картине психопатологических симптомов. Констатируется, что диагноз «детская шизофрения» был выставлен пациенту на основании ошибочной интерпретации наблюдавшихся расстройств поведения и симптомов «эмоционально-волевого дефекта» — мальчик с детства был малообщительным, нелюдимым, безынициативным, безэмоциональным, был склонен к совершению «странных» поступков, отмечалась задержка психического и речевого развития. В дальнейшем отставание в интеллектуальном и речевом развитии было ликвидировано, однако сохранялись «странности» поведения, коммуникативные сложности, инфантилизм, а также склонность к фантазированию и жизни в вымышленной реальности. Отчётливой позитивной психопатологии не регистрировалось. При обследовании Якова в 23-летнем возрасте доминирующими оставались коммуникативные сложности, аутизация и расстройства речи, специфичные для расстройства аутистического спектра, что позволило выставить ему данный диагноз взамен диагноза «шизофрения». Обращено внимание на то, что обнаруживавшиеся у пациента симптомы, расценённые как бредовые, галлюцинаторные, а также разорванность и бессвязность мышления можно было трактовать как квазипсихотические, связанные с нарушением когнитивной переработки информации, а не как психотические. Проведён анализ литературы и привлечено внимание коллег к проблеме гипердиагностики шизофрении и игнорирования возможности сходной симптоматики, относящейся к расстройствам аутистического спектра.

Ключевые слова: расстройства аутистического спектра; шизофрения; шизофреноформный психоз; квазипсихотические расстройства.

Как цитировать:
Менделевич В.Д., Нестерина М.К., Коновалова В.Н. Квазипсихотические феномены при расстройствах аутистического спектра // Неврологический вестник. 2025. Т. 57, № 2. С. 100–112. DOI: 10.17816/nb677141 EDN: QMELLK

Рукопись получена: 13.03.2025 **Рукопись одобрена:** 08.04.2025 **Опубликована online:** 25.05.2025

DOI: https://doi.org/10.17816/nb677141 EDN: QMELLK

Аутизм спектры тайпылышлары вакытындагы квазипсихотик феноменнар

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АННОТАЦИЯ

Мәкаләдә балачактан шизофрения буенча инвалидлыгы булган (балалар тибы, олигофрениясыман дефект) Яков исемле пациентның диагностик яктан төрлечә аңлатырга була торган клиник очрагы китерелә, Ул өч яшеннән берничә тапкыр психиатрия стационарларына госпитализацияләнгән, антипсихотик терапия узган. 23 яшендә махсус тикшерү вакытында "шизофрения" диагнозы расланмаган, чөнки күзәтелгән психопатологик симптомнар картинасына туры килмәгән. «Балалар шизофрениясе» диагнозы пациентка күзәтелгән тәртип бозуларын һәм «эмоциональ-ихтыяр дефекты» симптомнарын ялгыш интерпретацияләү аркасында куелган — малай балачактан ук аз аралашучан, кешеләрдән читләшүчән, инициативасыз, эмоцияләргә ярлы булган, психикасында һәм сөйләмендә дә тоткарлыклар күзәтелгән. Алга таба интеллектуаль һәм сөйләм үсешендәге артта калулар бетерелсә дә, үз-үзен тотышындагы «сәерлекләр», аралашудагы проблемалар, инфантилизм, шулай ук уйлап чыгарылган чынбарлыкта яшәү, фантазияләргә бирелү кебек билгеләр сакланып кала. Ачык чагылган позитив психопатология күзәтелми. 23 яшьлек вакытында тикшергәндә аралашудагы кыенлыклар һәм сөйләм тайпылышлары кебек аутизм спектрына хас булган тайпылышлар өстенлек итүе Яковка «шизофрения» диагнозы урынына әлеге диагнозны куярга мөмкинлек бирә. Саташулар, галлюцинацияләр. фикерләрнең өзеклеге, бәйләнешсезлеге дип бәяләнгән симптомнарны психотик дип түгел, ә мәгълүматны когнитив эшкәртүдәге тайпылышларга бәйле квазипсихотик билгеләр буларак аңлатырга мөмкин булганлыгы күрсәтелә. Фәнни хезмәтләргә анализ ясала, шизофрения гипердиагностикасы проблемасына, аутизм спектры тайпылышларына караган охшаш симптоматикага игътибар юнәлтелә.

Төп төшенчәләр: аутизм спектры тайпылышлары; шизофрения; шизофрения формасындагы психоз; квазипсихотик тайпылышлар.

Өземтәләр ясау өчен:
Менделевич В.Д., Нестерина М.К., Коновалова В.Н. Аутизм спектры тайпылышлары вакытындагы квазипсихотик феноменнар // Неврология хәбәрләре. 2025. Т. 57, № 2. 100–112 б. DOI: 10.17816/nb677141 EDN: QMELLK

Кулъязма алынган: 13.03.2025 **Кулъязма хупланган:** 08.04.2025 **Бастырылган online:** 25.05.2025

The controversy surrounding the potential for schizophreniform psychosis in individuals diagnosed with autism spectrum disorder (ASD) has remained unresolved for many years [1–12]. Recently, the discussion has become even more pressing, as there has been an increased incidence of psychotic symptoms in patients with ASD, which are often interpreted as symptoms of schizophrenia, particularly in cases of high-functioning autism (Asperger syndrome) [13–22]. The available evidence suggests that up to 34.8% of patients with ASD may experience psychotic symptoms, and symptoms of autism can be observed in 3.6%–60% of patients with schizophrenia [13]. The primary problem is the difficulty of differentiating between psychotic and quasipsychotic symptoms, which consequently hinders the differential diagnosis of ASD and schizophrenia. The secondary problem concerns the reliability of conclusions related to the presence or absence of self-reported delusions and hallucinations in patients with ASD, considering that cognitive distortions, impaired cognitive processing of experiences, impaired self-awareness, and disruption in reality testing are typical for this patient population. A significant question that remains unanswered is whether ASD is associated with specific forms of schizophreniform psychoses, or they are rather indicative of comorbid schizophrenia. These are not merely academic concerns, as the decision regarding drug treatment can have a significant impact on the patient's well-being, especially in cases where schizophrenia is diagnosed instead of ASD and antipsychotic therapy is indicated. This article presents a diagnostically ambiguous clinical case of 23-year-old Yakov,[1] who had been classified as disabled since childhood with a diagnosis of childhood-onset schizophrenia (childhood onset, oligophrenic-like defect). He has a history of epileptic absence seizures. Since the age of 3 years, he has been repeatedly admitted to psychiatric facilities and received antipsychotic therapy. At the age of 23 years, the diagnosis of schizophrenia was reevaluated. The treating psychiatrists were firmly convinced that the young patient's clinical symptoms included both negative and positive psychotic symptoms, such as hallucinations and delusions.

Yakov, 23 years old. At the time of the expert examination and clinical case conference, the patient was admitted to a day patient department of a psychiatric hospital for treatment of inappropriate behavior that had been observed in the context of conflicts with his parents and pneumonia. The patient talked to himself, expressed suicidal thoughts, and chose paradoxical suicide methods (e.g., "freezing outdoors, eating inedible food").

Patient's life and medical history (based on medical records and parents' reports) The patient was born from a second pregnancy complicated by adverse outcomes. From week 20 of gestation, the mother experienced hypertonic uterine. She delivered (first labor) at 40 weeks' gestation by emergency caesarean section performed for a narrow pelvis. A long time elapsed from the rupture of membranes to delivery was documented. The infant's birth weight and length were recorded at 4 kg and 57 cm, respectively, with Apgar score 7/8. On day 3, the infant was successfully attached to the breast, and on day 8, the mother and infant were discharged from the hospital. Breastfeeding was continued until the infant's 9th month of life. His mother is a police officer, and his father works as a journalist. The patient has a positive family history of mental illness. His younger brother had been diagnosed with childhood-onset schizophrenia. Additionally, his father's brother committed suicide, but had not received psychiatric care. Yakov's developmental history included mental delays. He did not engage in eye contact or demonstrate interest in toys. He was mainly indifferent when walking outdoors. However, his mood brightened noticeably whenever he was in the company of his family members. He smiled and laughed only when tickled. He failed to respond or exhibit any emotional engagement with his parents' facial expressions. The patient's physical development was appropriate for his age, but he was awkward in movement, often stumbling and falling. By the age of one, he began to articulate individual words, but after a surgical procedure for inguinal hernia under general anesthesia, he fell silent again. The ability to speak recovered by the age of 2.5–3 years. He attended child care centers, where he experienced significant difficulty in his adaptation. He demonstrated a strong reluctance to attend kindergarten, which led to significant emotional distress, as evidenced by his crying. He was mostly alone in the children's group and communicated only with adults. The patient's gaming activities were characterized by playing alone with a tendency to engage in object manipulation, such as rolling a car on the floor or resting his head against hard objects. He gradually adapted to the children's team and started following the established routine. In the classroom, he started assimilating the material, but only through imitation. The patient's self-service skills were poorly developed, and he required assistance from a caregiver or parents. When Yakov reached the age of one year and seven months, his brother Valery[2] was born. At that time, the boy's behavior became more childish, imitating his brother's actions and displaying symptoms of motor anxiety and protesting, such as "taking away the stroller, slamming doors, and taking toys away." Subsequently, he started to demonstrate feelings of jealousy toward his brother.

Starting from the age of two, the patient experienced intermittent episodes of absences, which were characterized by repetitive eye rolling for several seconds, occurring up to ten times a day, and short-term episodes of blepharoclonus

[1] The name is changed.

[2] The name is changed.

and posturing. Consequently, he was admitted to hospital, where he was diagnosed with **childhood myoclonic epilepsy with absence seizures**. Electroencephalography showed slow-wave activity and bilateral spike-wave bursts. After discharge, he received a maintenance anticonvulsant therapy (ethosuximide), and his condition improved over time. Seizures became less frequent, occurring only up to twice a day, but they lasted longer. The seizures resolved by the age of three years, and the anticonvulsant therapy was subsequently discontinued. During his childhood, he sustained a series of injuries that required surgical intervention, for which he underwent eight surgical procedures under general anesthesia.

His first visit to a local psychiatrist occurred at the age of 3.5 years when the child was presented with unsociability, speech delay, and behavioral abnormalities. From that time onward, he has been periodically assessed in a neuropsychiatric hospital with a diagnosis of **mental retardation and autism**. He received some general treatment. At the age of four years, Yakov's comprehension of speech was still underdeveloped. His own speech was characterized by single syllables and a mumbling articulation. The period of vocabulary expansion occurred simultaneously with the onset of stuttering. This period was characterized by a series of unusual physical actions, such as swaying his arms, tiptoeing, tapping on his ears, lip smacking, and mumbling words. At the age of five years, he was examined by a speech therapist, diagnosed with **speech delay**, and was therefore transferred to the speech therapy group in the kindergarten. At the age of six years, he became more diligent and attentive, and started to learn letters and attempted to put them into syllables.

At the age of eight years, the patient was admitted to the neurological department of a children's hospital, where he was diagnosed with **residual brain injury accompanied by asthenic-neurotic syndrome and mental delay**. Approximately 1.5–2 years later, he was hospitalized in a psychiatric facility for the first time, where he underwent a psychiatric assessment to clarify the diagnosis. His mother reported that Yakov experienced fatigue, tearfulness, and stereotyped motor behaviors involving his head and arms. Additionally, he demonstrated significant passivity, avolition, emotional blunting, and social withdrawal. After a thorough clinical assessment, he was diagnosed with **childhood-onset schizophrenia** and was classified as disabled. To confirm the diagnosis, he visited the Scientific Center for Mental Health of the Russian Academy of Medical Sciences, where clinicians suspected schizophrenia with early-onset residual organic disorder of the central nervous system. Psychological assessment revealed a significant developmental delay of basic cognitive functions, characterized by a complex interplay of mental impairment and dissociative cognitive dysfunction. Additional findings included deficits in voluntary activity regulation, motivational disturbances, stereotyped behaviors, and infantilism. The patient demonstrated significant behavioral negativism and impairments in social adaptation. Based on clinical assessments, he was diagnosed with **childhood-onset schizophrenia (F20.8183) with oligophrenia-like defect, asthenic syndrome, and catatonic syndrome.** The treatment included trifluoperazine (12.5 mg/day), fluvoxamine (50 mg/day), clozapine (25 mg/day), periciazine (4 mg/day), chlorpromazine (50 mg/day), and valproic acid (75 mg/day). The patient demonstrated significant clinical improvements after the initiation of treatment, including enhanced social adaptation, reduced anxiety, more active participation in group activities, and improved performance. His progress was evident through improved comprehension of verbal instructions and expansion of expressive language (e.g., transitioning from single words to sentence-level communication). Additionally, he engaged more actively in group interactions, exhibited reduced psychomotor agitation, and achieved greater independence in daily living skills.

At the age of eight years, the patient was assessed by the municipal medical-pedagogical commission to determine appropriate educational assignment. Although his mother reported initial recommendations for regular schooling, concerns were raised regarding his ability to progress beyond elementary-level curriculum and potential adaptive difficulties. Consequently, he was enrolled in a learning disability school, where he achieved satisfactory learning results. He had no peer relationships, demonstrated poor sustained attention, frequent memory lapses, and rapid mental fatigue. *Yakov's behavioral and cognitive profile (Grade 4)*: "Yakov's behavior is characterized by his introverted, compliant, and well-mannered demeanor. However, he easily becomes upset and cries frequently. He displays minimal social engagement with classmates and occasionally shows displeasure through growling. During space time and after-school care, he actively seeks isolation, retreating to empty spaces where he engages in self-directed whispering. His behavior during classroom activities is predominantly passive, and he frequently engages with internal sensory experiences, often raising questions that are not directly related to the lesson. However, Yakov demonstrates good reading and retelling skills. He transcribes dictated material adequately, but consistently omits sentence-initial capitalization following terminal punctuation. He shows an ability for rapid acquisition and recalling of poetic texts. Yakov performs arithmetic operations within 100 and knows the multiplication table."

Repeated psychiatric hospitalization at the age of nine years was required for the onset of motor stereotypies (repetitive arm and head movements), jumping up and down, talking to himself in whisper, tearfulness, and fatigue. His range of interests was severely constrained, and his social functioning was limited exclusively to his brother. The patient exhibited intermittent blunted affect, limited range of facial expressions. He demonstrated significant

delays in self-care skills that were significantly below the expected development for his age. Amorphous, disorganized thinking was combined with frequently non-substantive speech patterns. His intellectual functioning was assessed as below normal. Diagnostic evaluation confirmed **childhood-onset schizophrenia with an oligophrenic-like defect.** A speech therapist diagnosed level III general speech underdevelopment complicated by mild neurosis-like mixed stuttering. His treatment included valproic acid (300 mg/day), ethosuximide, risperidone 0.5 mg, and trifluoperazine 2.5 mg. Outpatient psychiatric follow-up maintained antipsychotic therapy with risperidone 0.5 mg twice daily. During treatment, clinical improvement was noted, with normalized sleep patterns and more organized behavior. During leisure periods, the patient was engaged in such activities as computer gaming, grocery shopping, and waste disposal. However, there were occasional instances of inappropriate dancing behavior and persistence in talking about cartoons. Parents reported decreased emotional vulnerability and reduced crying. Electroencephalographic findings were characterized by predominant alpha activity, with slow- and sharp-wave components in the right occipital region. Periodic high-amplitude sharp potentials (up to 150 μV) were observed predominantly in right hemispheric leads. Hyperventilation induced bilaterally synchronous, slow bursts in the frontal region followed by post-hyperventilation polymorphic sharp potentials and poorly defined complexes in the right occipital area. The examination identified pathological activity and excitability patterns originating from mediobasal temporal regions, with more significant abnormalities on the right side, particularly in the occipital region. These findings suggested epileptiform activity.

Yakov's behavioral and cognitive profile (Grade 9, learning disability school): "The boy's cognitive and social functioning are characterized by frequent pensiveness and absorption in internal thoughts, often appearing disconnected from his immediate environment. During lessons, he poses questions irrelevant to the topic discussed. He often avoids answering the direct questions, but gives rehearsed, memorized information. E.g., when asked to name Russian cities, he instead recites: 'The Russian Federation is the largest country in the world, its length is …'. He is often distracted. Socially, he remains detached from peers. Between classes, he engages in repetitive behaviors, including pacing while muttering to himself and swaying with his hands. When provoked by other children, he reacts aggressively, at times striking them. He is supersensitive to criticism and can start crying. Notably, he lacks typical aversion responses and can eat food picked up from the floor or ground."

At the age of 18 years, Yakov underwent another psychiatric hospitalization for a comprehensive mental evaluation for his disability assessment and in response to persistent concerns of his parents regarding his ongoing clinical symptoms, such as distractibility, fatigue, social withdrawal, emotional blunting, self-directed speech, and persistent retelling of game stories. Additionally, hand tremors, inappropriate smiling episodes, functional dependency, and highly selective social engagement were reported. Experimental psychological assessment revealed mild mnestic disturbances, attention fluctuations combined with reduced motivation, impaired operational component of thinking process, signs of stereotypy, reduced goal orientation, abnormal generalization processes, and subjective judgment formation. A concurrent speech pathology evaluation diagnosed **organic dyslalia and phonasthenia.** A comprehensive clinical assessment confirmed the diagnosis of **simple-type schizophrenia, characterized by continuous progression with predominant emotional-volitional defect**. The maintenance treatment included risperidone 2 mg/day and perphenazine 4 mg/day. Upon discharge, the patient demonstrated poor treatment adherence.

Yakov's (18 years) functional assessment based on his mother's report: "Being medically healthy, Yakov can maintain his personal hygiene. However, he exhibits disinterest in self-care activities, failing to recognize if he is dirty or has unpleasant body odor. He exhibits a lack of self-initiated hygiene behaviors. He brushes his teeth, takes a bath, or makes his bed only after a reminder, and when he attempts, he does not perform them properly. During bathing, he often merely wet himself without using cleansing agents. Sometimes, he requires help to complete basic hygiene tasks. His spatial navigation capacity demonstrates rigidity, with good orientation limited exclusively to well-established routes. He fails to use navigation aids such as smartphone applications, either attempting their use, but being unsuccessful. The patient's engagement almost exclusively focused on computer gaming activities. Psychomotor evaluation reveals poor fine and gross motor skills, with a tendency to sprawling handwriting. All movements appear clumsy and hesitating. The patient demonstrates negative attitude to household chores (dusting, floor washing, dish cleaning), performing tasks only under persistent reminders. His shopping behavior is characterized by adherence to predetermined shopping lists and accurate return of change. He demonstrates an inability to make independent product selections. He may leave appliances such as the gas stove, light, or iron operating, or he may leave the refrigerator door open. During puberty, he developed a strong wish to hug his mother, but he had always avoided any physical contact before."

At the age of 18 years, Yakov began his studies at the College of Entrepreneurship and Small Business. *Yakov's behavioral and cognitive profile*: "Yakov is undergoing vocational training in a specialized program, obtaining qualification of a shoe assembly worker. During his training, he demonstrated adequate skill acquisition. His behavior is characterized by persistent social withdrawal. He exhibits significant limitations in work capacity and productivity, with pace of work being below normal levels. He requires

continuous guidance and assistance from the foreman. He makes progress in his vocational training program. However, despite all efforts, he has learning difficulties. He gets tired quickly and can fall asleep. He exhibits slowed cognitive processing. Between classes, he consistently withdraws from group interactions, and exhibits motor stereotypy." During his vocational training, he successfully obtained two qualifications (shoe assembly worker and baker). At the age of 22 years, he was employed as a cleaner at a fast-food restaurant, where he has continued working to the present day. His job performance has been satisfactory, with no complaints from his employer. However, as reported by both the patient and his mother, he exhibited unusual behaviors, i.e., he ate leftover food from the waste compactor, explaining that he "felt sympathy for homeless people." After being admonished at work, he discontinued this behavior. The patient lives with his parents and younger brother in a comfortable apartment with all services and utilities.

He had a 5-year gap in psychiatric follow-up and treatment. Yakov was admitted to the psychiatric day hospital following an acute worsening of his mental status. In this episode, physical signs (fever and antibiotic therapy) were accompanied by psychiatric symptoms, such as sleep problems, self-directed speech, and ideation self-reported by the patient as "I felt like my mind had snapped: there was depression and suicidal thoughts, even though I'd never felt anything like this before." He believed his parents were treating him unfairly, so he left home one day in November wearing only a light jacket. He did not take his phone, money, or ID and wandered the city for six hours, convinced he deserved to die. The patient presented to his grandmother's house, begged her to cover the windows and hid the apartment keys, convinced someone was spying on them. During the acute episode, the patient looked frightened, his speech as disorganized. The speech content was characterized by the "word-for-word reproduction of Wikipedia fragments. He recited passages about monotheism and polytheism, switching to discussions of organ transplantation." The patient was engaged in stream-of-consciousness speech, expressing numerous grievances against his parents. This rapidly transitioned to self-accusatory statements accompanied by persistent apologies and uncontrollable crying, which was not typical of him. The patient disclosed intentional consumption of waste at his workplace, stating this was a suicidal act. Then, he became either mute or minimally responsive, answering questions only in monosyllables, as if "two personalities coexisted in him." The patient was initially admitted to a general medical facility with a diagnosis of moderate community-acquired right-sided polysegmental bronchopneumonia. Following discharge, his mental status remained unstable, characterized by persistent distractibility and impaired task execution (e.g., he could discard food instead of putting it in a refrigerator). He frequently grasped his head with hands. He created multiple accounts on his phone but lost access to them due to forgotten passwords. He also visited adult websites and periodically became introverted, talking to himself. A week before visiting psychiatrists, he was not able to cope with his work duties; he was transferred to shorter shifts, occasionally left work voluntarily, and wandered aimlessly outdoors.

Mental status on admission. Despite his fussy behavior, he maintains a neat appearance. He tends to avoid eye contact, often sitting with his head down and pressing his fingers against the bridge of his nose, explaining that "he has discovered the art of capturing the light in his eyes... light is an epiphany ..." He also mentions, "I've found beauty in cars." His facial expressions are minimal; however, he occasionally smiles or frowns without an obvious reason. While he does pay sufficient attention during conversational interactions, he typically maintains a limited level of engagement. His responses are often random, and he frequently responds with lengthy monologues composed of memorized lines from comics and cartoons. His voice is monotonous, lacking emotional inflection, and his speech has a chant-like intonation. His mood is well-balanced. The patients exhibit an inability to attain critical insight. Thinking is characterized by fragmentation and diversity, accompanied by tangentiality. The patient reports experiencing a series of auditory hallucinations of deceased relatives, specifically his grandfather Minka and great-grandmother Marusya. He also explained that he had previously experienced similar auditory phenomena ("voices") when the portal was opened by the God. However, "when the portal closes, these voices disappear." These voices say: "Use your superpowers wisely." Additionally, he reported auditory experiences involving "voices of well-known characters, both real and mythical, including Lucifer and fallen angels." The patient describes these internal voices as providing him with "solace and uplift". He says: "...the voices make me feel better. They're like demons or outcasts, just like me, but they couldn't break through my mind. They couldn't figure anything out about me. I'm like Bruce Wayne.[3]"

On the first day of hospitalization, the patient exhibited signs of agitation, characterized by restlessness, head-clutching, and skipping from side to side. He could not sit still, while circling around and talking to himself. His condition was stabilized with 0.5% intramuscular haloperidol (1.0 mL). Then, the patient was switched to risperidone 4 mg daily. Risperidone therapy improved his behavior; however, he continued to experience social withdrawal and did not communicate with others in the department. In his leisure time, he listened to songs, watched anime, played video games, and sometimes whispered to himself.

[3] Bruce Wayne (Batman) is a character from the DC Extended Universe, based on the eponymous character from DC Comics.

The following is an example of conversation:

"Explain why you are going to the day hospital."

"Garbage makes me feel bad. It starts to hurt my blood, but I mended my ways when I told my mother. I also took out my anger on the people I cared about because I had been humiliated by my father, so I tried to be stronger. The negative part of me reminds me of the bad things. I got up to nonsense. I ran away from home, trying to get away from society because I felt resentful about my father, and I made him depressed."

"Tell me about the 'voices' you have heard."

"I heard 'voices' when I was touched by a demon that took over my mind. In my head, I have 'voices' of well-known characters, including angels, demons, and others from mythology, such as Lucifer and fallen angels."

"How did you know it was a demon?"

"He looked at me like an angel, with calmness, when I was walking and also sitting on the swing."

"What did he look like?"

"Like a man."

"How did you know he was an angel?"

"I looked away, and he vanished."

"What did Lucifer say?"

"He told me to go to the left because I was obsessed with the antagonist."

"Do you hear a voice coming from inside your head or from outside?"

"When I don't have anyone to talk to, I talk to myself." (turning away and whispering quietly)

"You talked to yourself at school. How would you explain that?"

"I talked to the voice of reason."

"What kinds of things did you discuss?"

"Interesting gaming things, such as Warhammer,[4] villains, and Warhammer 40k. The villains as antagonists were all very interesting."

"What do you think about your relationship with your father?"

"I respect him, but he is weak and cowardly, yet also brutal. He married my mother because she is a sunny optimist. He tried to break into my account. He thinks I'm doing the wrong thing. He reset everything to factory settings. He says I can't be trusted. I disappointed my mom, dad, and brother Valery."

"Do you think you need treatment?"

"Yes, I think I do."

"Why?"

"I'm undergoing rehabilitation."

"Why did you leave home without taking your daily dose of drugs?"

"I was in a hurry to see my grandmother."

Comparative characteristics of the brothers Yakov and Valery.[5] As reported by their parents, the brothers share several characteristics, including mental retardation (coherent phrasal speech since the age of eight years, following hospitalization during which they received treatment), social withdrawal, cognitive decline, an obsessive interest in their own interests, a negative perception of strangers, and sensitivity to changes in the environment, expressed through outbursts in response to new teachers. Valery's actions and behaviors exhibited a striking similarity to those of his brother, mirroring them closely. During early childhood, interaction between the two was minimal, as they played in different areas of the room. Valery demonstrated a strong bond with his older brother, acting as his protector; he could have a fight with those who mistreated him. In contrast, Yakov exhibited a notable absence of affection and warmth toward his brother. At school, Yakov demonstrated a particular interest in abstract, unreal concepts, yet he lacked the dexterity to engage in crafting activities. His fine motor skills were consistently weak, as evidenced by his difficulty in tying his shoelaces. Valery's creative inclinations were expressed through handcrafting, particularly the construction of elegant vessels and other decorative objects. During his college years, Yakov demonstrated signs of irritability and aggression toward his brother. Despite his physical superiority, Valery chose not to engage in self-defense. Recently, Yakov "has revised his attitude toward Valery, and has started to thank him for his kindness and care." The brothers have become more open with each other, and their discourse has noticeably matured. They both attend the gym, but it is evident that Yakov adopts a more passive role there. Currently, they are employed in the same fast-food restaurant, though they are on different shifts. Valery also demonstrates a higher level of adaptability, concentration, and performance, and he is more open to receiving guidance. Yakov refuses to acknowledge his missteps, exhibiting a notable degree of obstinacy. They both consider themselves to be mentally healthy.

Due to the ambiguity of Yakov's clinical symptoms, a clinical case conference involving several dozen psychiatrists was held.

Mental status (at the time of the clinical case conference). The patient entered the examination room with an irregular gait, walking with his legs wide apart and exhibiting a lack of coordinated movement. His facial expressions were minimal and remained unchanged during the conversation. From the start, the patient's monotonous, "robotic" speech was noted. He was speaking loudly and distinctly, yet his speech was devoid of any emotional expression. At the end of each phrase, he raised his voice unnaturally, which made him sound irritated. However, when faced with direct questions

[4] Warhammer is a military tactical game.

[5] Valery was diagnosed with the same mental disorder as Yakov, i.e., childhood schizophrenia.

of whether the professor's questions had offended him, he firmly denied it, stating that he was totally calm. Every time he articulated, he did not accentuate specific syllables, so it would be inaccurate to assert that his speech was chanted. It was perceived that he was reciting memorized phrases, attempting to provide a complete response to the question. However, Yakov's responses demonstrated a remarkable level of accuracy and sophistication, incorporating adult and at times scientific language. This style of presentation conflicted with his outward displays of childish behavior. When he was choosing answers to questions, he usually avoided eye contact with the other person, instead directing his gaze to the floor.

The following is an example of conversation:

"What is empathy?"

"Empathy means understanding other people's feelings, showing compassion, and entering into someone's feelings. It means listening to and understanding others so that you can comfort and accept them, including their irritation, sadness, and emptiness."

"Where did you learn this definition?"

"I have a lot of meaningful conversations with smart, interesting people, like my classmate Ilyaz. I have gained valuable experience listening to people, accepting them, and focusing on what they say, especially when it comes to deep hearty talks with Valery and my grandma."

"Are you empathetic?"

"Yes, I listen carefully. I ask a question to respond, or I answer to disagree. I often answer in silence, agreeing with what has been said. I can make eye contact, but I'm not very confident around strangers or people I don't know."

"What are your plans for the future?"

"In the future, all I have to do is go to work until I retire, move to a new apartment to start a new life even better than the old one, and live with grandma while she is alive. When she dies, we will follow her to her grave and solve the apartment issue."

"What does it mean to 'rise to the occasion'?"

"Let's say you want to share your opinion, and someone interrupts you, and you get irritated. You suffer, and eventually, you'll have an outburst. But I keep my cool no matter what. Valera takes everything for granted."

When he talks about himself, he uses sophisticated language to avoid missing any details: "All that happened to me were paranoid, annoying thoughts. If I die, I will disgrace myself to the public. I will tarnish my reputation. I used that name because I was paranoid, and then I changed my mind when dad wouldn't let me lie. He never let me lie about our Soviet government. I argued with dad to show him my feelings." When asked about the "voices," he says, "I've been talking to myself for so long that the voice of reason has acquired its own personality. This is my alter ego, who I prefer to call Artyom. I had a classmate named Artyom. He was amazing. My grandfather's name was also Artyom. My alter ego started living his own life, he was growing and insinuating, in a way that clearly demonstrated his power, as Sauron[6] showed everyone that he had power, no matter who he transformed into, and it felt like he was controlling me. I didn't want to believe in miracles, but I saw the beauty in simple things when I saw a miracle and truly believed in it. I suffered from schizophrenia, which made it hard for me to step outside my comfort zone, but compared to my brother, it was much easier for me. Even though he looked impressive, Valery always seemed weak and not confident. He wanted to show everyone his true character, and he behaved dreadfully. I have always taught Valera the best example of how to ignore peers."

He admitted that he wanted to die because he was having conflicts with his father. He described the episode when he left home in the cold autumn weather wearing a light jacket. He said: "...it was my malicious plan to commit suicide. I started listening to fictional stories, and started harboring a malicious plan. Then I changed my mind when I thought about my grandmother, and I admitted that I had infected my blood, spoiled it with leftovers. They helped me recover. I thought I had nothing to lose. I was so desperate that I was overwhelmed by darkness. My life was a dark and terrible journey because my family was torn apart by conflict. It was necessary to overcome our disputes and find common ground for the sake of friendship, peace, and love." He described the concept of "love" as follows: "First of all, love is expressed through caring for others, providing emotional support, and being concerned about their well-being. Love differs from sympathy in the sense that when you fall in love with someone, you want to build a relationship, have dates, share feelings, secrets, and build bridges. Sympathy, on the other hand, is just positive feelings when you appreciate beautiful and pretty girls. When I was a child, I liked Diana, a very sweet, easy-going, and positive girl from my class who took everything very seriously, so I found her cute. We were such good friends." When asked how he would know that he liked someone, he replied: "...if a girl charms me, speaks from the heart, follows my lead, and listens, I'll try to get closer to her. When it comes to communication, I am attentive, persistent, intelligent, persuasive, honest, open, easy-going, cold-blooded, diligent, and hardy."

In the conversation, he said that sometimes he "got up to nonsense" and behaved in a strange way, especially when he ate leftovers or thought of his own death. He was utterly convinced that he had witnessed two miracles. The first occurred when he saw an "angel" sitting on a bench in the playground. The remarkable nature of this occurrence was further underscored by the fact that the entity vanished the moment Yakov turned away. He believes that this

[6] A character of The Lord of the Rings.

unusual and wonderful phenomenon of "image fading" suggests something extraordinary. The second occurrence he considers a "miracle" happened to him on a trolleybus when passengers also disappeared at the moment when he was distracted for a short time. In such moments, he reports no feelings of fear, but rather amazement. He refuses to accept the logical explanation of the events (the angel left; the passengers got off at the bus stop).

Yakov also reports being accustomed to mental self-talk, posing and answering questions to himself, which can explain his lips moving and whispering some words. This practice provides him with a deeper understanding of his own experiences and the external circumstances he encounters. When he mentioned the presence of internal voices in his head, he was essentially referring to the phenomenon of talking to himself. However, he confirmed that there was an episode (during a period of fever) when he believed that he was watched for and that he might be targeted for persecution. This phenomenon was transient, subsiding promptly upon the resolution of pneumonia. A conversation with the patient ruled out the presence of any cognitive impairments, delusions, or hallucinations.

Psychologist's conclusion. Specific disorders that affect the motivational and volitional component and general activity are accompanied by impaired personal motivational and operational components of thinking as a part of schizophrenic pathopsychological symptom complex. These disorders are characterized by weaker critical thinking and an intelligence quotient (IQ) of 80 points or less, which is classified as mild cognitive impairment. The personality structure may also be associated with emotional immaturity, rigidity, significant emotional lability, impulsivity, and reduced control. Irrational manifestations and difficulties in social adaptation are potential outcomes.

Neurologist's conclusion. Upon examination, no clinical evidence of a focal lesion of the nervous system was identified.

Electroencephalography. Bioelectrical activity of the brain within the age-appropriate variability. Cerebral abnormalities are classified as moderate, characterized by alpha rhythm disorganization with a tendency toward desynchronization. No additional information has been provided for hyperventilation. No focal slow-wave or epileptiform activity was recorded. The response of cortical cells to afferent stimuli is preserved, with the reduced lability of the cortical structures.

Ultrasound encephalography. No echographic data suggestive of displacement of the median brain regions have been identified, and the cerebrospinal fluid pathways remain unchanged. *Epileptologist's conclusion* (based on 4-hour sleep electroencephalography): The cortical rhythm of sleep and wakefulness was within normal limits. No regional slowdown or interhemispheric asymmetry was detected. No epileptiform activity or epileptic seizures have been reported. The diagnosis is paroxysmal conditions of unspecified origin. Upon examination, no compelling evidence of epiactivity was found.

The clinical case of 23-year-old Yakov should be recognized as diagnostically ambiguous, as the diagnosis of schizophrenia with oligophrenic-like defect that he had for many years was not consistent with the observed pattern of psychopathological symptoms. The diagnosis of childhood schizophrenia had been based on behavioral disturbances and symptoms of emotional-volitional deficit: from early childhood, the patient exhibited low sociability, social withdrawal, lack of initiative, emotional flatness, and a tendency toward unusual behaviors, along with developmental delays in cognition and speech. No signs of positive psychotic symptoms were observed. The diagnosis of schizophrenia established at the age of eight years ignored the fact that Yakov had had abscess seizures since the age of three years and was diagnosed with epilepsy, confirmed by the electroencephalographic examination. Later, his intellectual and speech delays eventually resolved, but behavioral peculiarities, communication difficulties, infantilism, and a tendency to fantasize and live in an imagined reality persisted. A comprehensive evaluation of at the age of 23 years showed that the predominant symptoms were communication difficulties, autism, and ASD-specific speech disorders [23, 24]. His manner of speech attracted attention for its mechanized, robotic nature, bearing resemblance to the speech of an individual with hearing impairments. The voice was characterized by a high pitch, slight modulation, and monotonous quality. Furthermore, the presentation format was unusual. The patient provided detailed definitions and descriptions that were more similar to philosophical concepts than to everyday language. Visually, his behavior could be characterized as that of an elderly individual, comparable to that of an "eccentric professor" [25]. For example, he defined empathy as "understanding other people's feelings, showing compassion, and entering into someone's feelings. It means listening to and understanding others so that you can comfort and accept them, including their irritation, sadness, and emptiness." However, no cognitive impairments, such as tangentiality, fragmentation, or asyndetic thinking, were identified. Therefore, by the age of 23 years, Yakov's clinical symptoms corresponded to the diagnosis of **autism spectrum disorder**.

The debate surrounding the psychopathological qualifications of the patient's disease focused on symptoms that were interpreted by treating physicians as delusional and hallucinatory. Specifically, verbal hallucinations were identified not only when the patient reported hearing "voices of well-known characters, both real and mythical, angels, demons, mythological characters, Lucifer, and fallen angels" when he "was touched by a demon that took over" his mind, but also when he was observed muttering to himself. Furthermore, he reported having witnessed two "miracles": a supposed magical disappearance ("fading") of an angel who had allegedly transformed into a human male, and of trolleybus passengers. The psychiatrists, however, regarded his statements about his superpowers as fragmentary delusions,

suggesting an **atypical form of schizophrenia**. It is also important to note that during the clinical case conference, neither hallucinations nor delusions were documented in the patient. He persisted in his belief that he had witnessed "miracles" ("disappearances of human angels"), but insisted that he had not heard any voices, and that he only spoke to himself. He expressed critical views on his own behavior, considering it as he had "got up to nonsense," and said that he had been thinking about suicide because of disputes with his father and had chosen unusual methods (eating inedible food, freezing outdoors). He said: "All that happened to me were paranoid, annoying thoughts. If I die, I will disgrace myself to the public. I will tarnish my reputation. I used that name because I was paranoid, and then I changed my mind when dad wouldn't let me lie. He never let me lie about our Soviet government. I argued with dad to show him my feelings."

Before the most recent hospitalization in a day hospital, there was a significant change in his mental state when he was dealing with certain physical health concerns, including pneumonia with fever. The patient exhibited disorganization and disconnectedness of his speech patterns ("Garbage makes me feel bad. It starts to hurt my blood, but I mended my ways when I told my mother."). This condition was only present for a short period of time and was alleviated after the patient recovered.

Thus, the central question was whether delusional disorders and hallucinations (verbal or visual) were part of the clinical presentation, whether the symptoms could be interpreted as a schizophrenic process with periodic exacerbations, or whether the phenomena detected were of a schizophreniform, quasipsychotic nature and constituted a progression from ASD.

The recent scientific publications have focused on the discussion of the potential for the emergence of schizophreniform psychoses in individuals with ASD, and the concomitant occurrence of ASD and schizophrenia [1]. Some authors have proposed that the "hypermentalizing brain in patients with schizophrenia precludes the possibility of having ASD" [26]. In contrast, other researchers have argued for the potential for comorbidity. The notion of the co-occurrence of ASD and schizophrenia was first documented in ICD-10 and DSM-4 Current DSM-5 classification, however, recognizes the comorbidity of these disorders under certain conditions: "If there is a history of autism spectrum disorder, the additional diagnosis of schizophrenia is made only if delusions or hallucinations are also present for at least 1 month (or less if successfully treated)" [27]. However, the differential diagnosis of these mental disorders is of particular significance for clinical practice, as it directly informs the selection of the most appropriate drug treatment.

As suggested by Bakken et al. [28, 29], delusions can be easily confused with autistic symptoms. Individuals with ASD frequently use phrases that are comprehensible only to those who are well-acquainted with them. This phenomenon is referred to as idiosyncratic speech. The phenomenon of self-directed speech has frequently been documented in individuals diagnosed with ASD and largely reflects the manner in which they process their daily experiences. It is also known that people with ASD have cognitive and information processing impairments that affect their thinking and speech. A significant challenge that they face is the inability to successfully switch between and maintain focus on topics with partners, and to accept their point of view. In the acute psychotic phase of ASD, symptoms of disorganized speech may be observed, which are similar to those seen in schizophrenia, including incoherent speech (i.e., "word salad") and pressured speech [30].

Consequently, Yakov's symptoms, initially interpreted as delusional and hallucinatory and characterized by fragmented and incoherent thinking, could be reinterpreted as either schizophreniform manifestations associated with external factors (fever and pneumonia) or quasipsychotic symptoms accompanied by impaired cognitive information processing, rather than psychotic symptoms. The phenomenon of "angel fading," which Yakov described as a "miracle," can be interpreted as a pathological fantasy, as it was in the nature of interpreting real events, and not of hallucinatory or delusional perception. In one case, the patient saw a man sitting on a bench, and in the other, he saw people on a trolleybus. After Yakov turned away and looked back at the place where they were, they disappeared. Pathological fantasies and living in a fictional reality are typical of individuals with ASD [31]. Some authors have used the term "attenuated psychotic disorders" to describe psychotic symptoms in individuals with ASD [32]. It is reasonable to conclude that distinguishing between schizophrenia and ASD based on positive symptoms rather than negative symptoms is both more appropriate and scientifically justified [15].

The clinical case of the patient Yakov, presented in this article, can be used to draw the attention of professionals to the problem of overdiagnosis of schizophrenia and ignoring the potential overlap with symptoms of ASD [33]. Furthermore, it is crucial to emphasize that the potential manifestation of schizophreniform syndromes in individuals diagnosed with ASD is currently being considered as a possible variant of this disease.

ADDITIONAL INFORMATION

Author contributions: V.D. Mendelevich — investigation, data curation, differential diagnosis; M.K. Nesterina — investigation, writing—review & editing; V.N. Konovalova — investigation, writing—review & editing. All authors confirm that their authorship meets the international ICMJE criteria (all authors made substantial contributions to the conceptualization, investigation, and manuscript preparation, and reviewed and approved the final version prior to publication).

Consent for publication: Written informed consent was obtained from the patient and his legal representatives for the publication of personal data in a scientific journal and its online version (signed on December 19, 2024). The scope of published data was approved by the patients.

Funding sources: No funding.

Disclosure of interests: The authors have no relationships, activities, or interests for the last three years related to for-profit or not-for-profit third parties whose interests may be affected by the content of the article.
Statement of originality: No previously published material (text, images, or data) was used in this work.
Data availability statement: The editorial policy regarding data sharing does not apply to this work.
Generative AI: No generative artificial intelligence technologies were used to prepare this paper.
Provenance and peer review: This work was submitted unsolicited and reviewed following the standard procedure. The review process involved an external reviewer, a member of the editorial board, and the in-house scientific editor.

REFERENCES | СПИСОК ЛИТЕРАТУРЫ

1. Ribolsi M, Fiori Nastro F, Pelle M, et al. Recognizing psychosis in autism spectrum disorder. *Front Psychiatry.* 2022;13:768586. doi: 10.3389/fpsyt.2022.768586
2. Ivanovic I. Psychiatric comorbidities in children with asd: autism centre experience. *Front Psychiatry.* 2021;12:673169. doi: 10.3389/fpsyt.2021.673169
3. Mishma SVS, Shanmugan A. The prevalence of psychiatric and behavioral comorbid among autistic adults. *Biotech Res Asia.* 2024;21(2). doi: 10.13005/bbra/3242
4. Chien YL, Wu CS, Tsai HJ. The comorbidity of schizophrenia spectrum and mood disorders in autism spectrum disorder. *Autism Res.* 2021;14(3):571–581. doi: 10.1002/aur.2451
5. Barlattani T, D'Amelio C, Cavatassi A, et al. Autism spectrum disorders and psychiatric comorbidities: a narrative review. *Journal of Psychopathology.* 2023;29:3–24. doi: 10.36148/2284-0249-N281
6. Jutla A, Foss-Feig J, Veenstra-VanderWeele J. Autism spectrum disorder and schizophrenia: An updated conceptual review. *Autism Res.* 2022;15(3):384–412. doi: 10.1002/aur.2659
7. Blackshaw AJ, Kinderman P, Hare DJ, Hatton C. Theory of mind, causal attribution and paranoia in Asperger syndrome. *Autism.* 2001;5(2):147–163. doi: 10.1177/1362361301005002005
8. Keller R, Bari S. Psychosis and ASD. In: Keller R, editor. *Psychopathology in adolescents and adults with autism spectrum disorders.* Springer Nature Switzeland AG; 2019: P. 51–65. doi: 10.1007/978-3-030-26276-1_4
9. Keller R, Piedimonte A, Bianco F, et al. Diagnostic characteristics of psychosis and autism spectrum disorder in adolescence and adulthood. A case series. *Autism Open Access.* 2016;6:159. doi: 10.4172/2165-7890.1000159
10. Craiga JS, Hattona Ch, Craigb FB, Bentall RP. Persecutory beliefs, attributions and theory of mind: comparison of patients with paranoid delusions, Asperger's syndrome and healthy controls. *Schizophr Res.* 2004;69(1):29–33. doi: 10.1016/S0920-9964(03)00154-3
11. Mazzone L, Ruta L, Reale L. Psychiatric comorbidities in Asperger syndrome and high functioning autism: diagnostic challenges. *Ann Gen Psychiatry.* 2012;11(1):16. doi: 10.1186/1744-859X-11-16
12. Varcin KJ, Herniman SE, Lin A, et al. Occurrence of psychosis and bipolar disorder in adults with autism: A systematic review and meta-analysis. *Neurosci Biobehav Rev.* 2022;134:104543. doi: 10.1016/j.neubiorev.2022.104543
13. Chisholm K, Lin A, Abu-Akel A, Wood SJ. The association between autism and schizophrenia spectrum disorders: a review of eight alternate models of co-occurrence. *Neurosci Biobehav Rev.* 2015;55:173–183. doi: 10.1016/j.neubiorev.2015.04.012
14. Perlman L. Adults with Asperger disorder misdiagnosed as schizophrenic. *Professional Psychology: Research and Practice.* 2000;31(2):221–225. doi: 10.1037//0735-7028.31.2.221
15. Trevisan DA, Foss-Feig JH, Naples AJ, et al. Autism spectrum disorder and schizophrenia are better differentiated by positive symptoms than negative symptoms. *Front Psychiatry.* 2022;11:548. doi: 10.3389/fpsyt.2020.00548
16. Foss-Feig JH, Lurie S, Hubert MF. Schizophrenia and other psychotic disorders in autism spectrum disorder. In: White SW, Maddox BB, Mazefsky CA, editors. The Oxford handbook of autism and co-occurring psychiatric conditions. Oxford University Press; 2020. P. 53–72. ISBN: 9780190910761
17. Nilsson M, Arnfred S, Carlsson J, et al. Self-disorders in asperger syndrome compared to schizotypal disorder: a clinical study. *Schizophr Bull.* 2020;46(1):121–129. doi: 10.1093/schbul/sbz036
18. Vaquerizo-Serrano J, Salazar de Pablo G, Singh J, Santosh P. Autism spectrum disorder and clinical high risk for psychosis: a systematic review and meta-analysis. *J Autism Dev Disord.* 2021:52(4):1568–1586. doi: 10.1007/s10803-021-05046-0
19. Kincaid DL, Doris M, Shannon C, Mulholland C. What is the prevalence of autism spectrum disorder and ASD traits in psychosis? A systematic review. *Psychiatry Res.* 2017;250:99–105. doi: 10.1016/j.psychres.2017.01.017
20. Mammarella V, Monducci E, Maffucci A, et al. Assessment of psychotic risk in a sample of children and adolescents with autism spectrum disorder compared to a group of "Clinical high risk" patients: a preliminary study. *Children.* 2024;11(3):372. doi: 10.3390/children11030372
21. Licinio J, Wong ML. Psychosis and autism spectrum disorder: a special issue of Molecular Psychiatry. *Mol Psychiatry.* 2023;28(5):1830–1832. doi: 10.1038/s41380-023-02250-5
22. Kiyono T, Morita M, Morishima R, et al. The prevalence of psychotic experiences in autism spectrum disorder and autistic traits: a systematic review and meta-analysis. *Schizophrenia Bulletin Open.* 2020;1(1):sgaa046. doi: 10.1093/schizbullopen/sgaa046
23. Mamokhina UA. Speech features in autism spectrum disorders. *Autism and Developmental Disorders.* 2017;15(3):24–33. doi: 10.17759/autdd.2017150304 EDN: ZMIOPP
24. Borodina LG. Psychopathology in adults with child diagnosis of autism spectrum disorders. *Psychiatry (Moscow).* 2019;(81):30–38. doi: 10.30629/2618-6667-2019-81-30-38
25. Volkmar FR, Klin A, Schultz RT, et al. Asperger's disorder. *American Journal of Psychiatry.* 2020;157(2):262–267. doi: 10.1176/appi.ajp.157.2.262
26. Zhou HY, Yang HX, Gong JB, et al. Revisiting the overlap between autistic and schizotypal traits in the non-clinical population using meta-analysis and network analysis. *Schizophren Res.* 2019;212:6–14. doi: 10.1016/j.schres.2019.07.050
27. Moerloose SD, Degraeve G, Smul CD, Lemmens G. Autism spectrum disorder and schizophrenia: a challenging differential diagnosis. *Tijdschr Psychiatr.* 2023;65(1):46–49.
28. Bakken TL, Eilertsen DE, Smeby NA, Martinsen H. The validity of disorganised behaviour as an indicator of psychosis in adults with autism and intellectual disability: A single case study. *Mental Health Aspects of Developmental Disabilities.* 2009;12(1):17–22.
29. Bakken TL. Behavioural equivalents of schizophrenia in people with intellectual disability and autism spectrum disorder. A selective review. *Int J Dev Disabil.* 2021;67(5):310–317. doi: 10.1080/20473869.2021.1925402
30. Bakken TL, Helverschou SB, Eilertsen DE, et al. Psychiatric disorders in adolescents and adults with autism and intellectual disability: a representative study in one county in Norway. *Research in Developmental Disabilities.* 2010;31(6):1669–1677. doi: 10.1016/j.ridd.2010.04.009
31. West MJ, Somer E, Eigsti IM. Immersive and maladaptive daydreaming and divergent thinking in autism spectrum disorders. *Imagin Cogn Pers.* 2023;42(4):372–398. doi: 10.1177/02762366221129819
32. Maat A, Therman S, Swaab H, Ziermans T. The attenuated psychosis syndrome and facial affect processing in adolescents with and without autism. *Front Psychiatry.* 2020;11:759. doi: 10.3389/fpsyt.2020.00759
33. Mendelevich VD. Overdiagnosis of schizophrenia as a cognitive distortion of the process of knowledge of clinical reality. *Neurology Bulletin.* 2023;55(1):5–14. doi: 10.17816/nb160308

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