WEP Warwick Evans Publishing

International Journal of Public Health and Medical Research

ISSN: 3006-7707 (Print), ISSN: 3006-3752 (Online) | Volume 6, Number 6, Year 2026
DOI: https://doi.org/10.62051/ijphmr.v6n6.10
Journal homepage: https://wepub.org/index.php/IJPHMR/index

Clinical Manifestation Summary of Common Comorbidity Conditions Associated with ASD

Yinan Zheng

College of Nursing, Shanxi University of Chinese Medicine, Jinzhong City, Shanxi Province, 030619, China

ABSTRACT

Autism spectrum disorder is a heterogeneous neurodevelopmental disorder with problems in social communication and restricted or repetitive behaviours. However, there are often many other types of psychiatric diseases, neurological disorders, gastrointestinal diseases and sleep disorders in people who need help. List the main clinical features of frequent co-occurring disorders in autism in this paper. Psychiatric comorbidities, such as attention deficit hyperactivity disorder and anxiety disorders, may present as emotional dysregulation, impulsivity, avoidance behaviours and self-harm. Neurological diseases that cause repetitive movement disorders should be excluded first. Gastrointestinal disorders can be expressed indirectly, such as irritability, anger and poor sleep in children who are unable to communicate verbally. Sleep disorders will result in various mental and behaviour problems. Based on the above, it can be seen that the doctor should not assume autism is the cause of other diseases and disorders, but must also cooperate with other departments to conduct coordinated diagnosis and treatment.

KEYWORDS

Autism spectrum disorder; Clinical manifestations; Psychiatric comorbidities; Epilepsy; Gastrointestinal symptoms; Sleep disorders

1. INTRODUCTION

Autism spectrum disorder is now generally considered a wide range of neurodevelopmental disorders. The first diagnostic systems are divided into two categories: enduring impairments in social interaction and the presence of restricted and repetitive behaviours. Only by focusing on the above general behaviour may we overlook other difficulties faced by people at different stages of development. It has been widely known in the clinic that many other medical and mental health problems can also be linked to a particular disorder. These co-morbidities are not merely accidental; they occur relatively often and often affect people's daily lives and their capacity to adjust to other problems to a greater extent than the main diseases of the disorder itself. In recent years, many doctors have come to believe that treating a patient comprehensively means understanding all the reasons behind their behaviour from all aspects in life, not just behaviour in isolation.

The clinical landscape is very complicated. If a person has severe behavioural problems or cognitive decline, it is often due to an underlying, untreated illness other than autism spectrum disorder (ASD). Diagnostic overshadowing has unfortunately been occurring at an increasing rate in daily life. Healthcare staff may believe that all severe anxiety, intense pain in the stomach due to digestive problems, and prolonged fatigue are all symptoms of the main neurodevelopmental disorder. Thus, there is a delay in treatment, incorrect care, and extended pain for patients. Therefore, it has been challenging to diagnose and address the multiple overlapping diseases of the central nervous system.

The purpose of this paper is to present an organised list of the symptoms and signs of the most frequent accompanying diseases of this group. Based on the various manifestations of psychiatric, neurological, systemic and sleep disorders, this paper aims to help doctors distinguish them from other sources of pain and thus accurately diagnose patients' problems. Section 2 examines the adverse effects of severe psychiatric co-morbidities. Section 3 presents the neurological expressions and seizure disorders. Section 4: Widespread gastrointestinal diseases. Section 5 is on prolonged sleep disorders. Section 6 presents a conclusion and proposes an all-around care model.

2. PSYCHIATRIC COMORBIDITIES AND MANIFESTATIONS

Neurodevelopmental disorders and mental illnesses have a high degree of overlap, and many of these diseases can manifest in people in multiple ways. Based on a large number of studies, it has been shown that most children and adults with autism spectrum disorder are also likely to have one or more other mental health conditions at the same time [1]. Among them, Attention-Deficit/Hyperactivity Disorder and various types of clinical anxiety disorders are by far the most frequent and clinically significant. Clinically, these conditions have frequently been found to occur simultaneously, and the resulting phenotype is thus very complex [8]. Clinically, the expression of coexisting attention deficit disorders is generally serious; they involve prominent inattention, severe impulsivity, and excessively high levels of aggressive motor activity well above what is expected for a person's age at that time [3]. It is not a restricted and repetitive motor mannerism; rather, the hyperactivity related to this comorbidity is widespread and significantly impairs the learning of new school subjects. In addition, people with the above-mentioned double diagnosis are very likely to show pronounced deficits in high-level executive functions and thus struggle in their studies and life outside school [9].

At the same time, there are also anxiety disorders in the clinic. Although anxiety is widespread among all people, it is particularly severe and long-lasting in the case of autism, and it often appears in an abnormal way [2]. Severe anxiety in terms of clinical features often presents as specific environmental fears, obsessive-compulsive tendencies, and severe social anxiety [7]. Since many people with a developmental delay have difficulty communicating verbally, their inner anxiety often shows up as noticeable, externalised behaviours rather than expressed in words [3]. Severe anxiety in children can manifest as violent temper outbursts, a sudden increase in repetitive behaviours, self-harm, and an overreaction of the body to minor environmental changes [1]. Diagnostic overshadowing is also a problem here; inexperienced clinicians may think that an anxiety-induced meltdown is a primary autism behavioural deficiency and thus fail to provide suitable cognitive-behavioural intervention [9]. In addition, particular clinical phobias directly associated with sensory processing difficulties are relatively frequent and can result in serious avoidance behaviour in specific situations and chronic social withdrawal [7]. The different psychiatric manifestations of the two conditions in contemporary clinical practice need to be understood well, and therapeutic approaches must be modified accordingly due to the presence of comorbid disorders [2, 8].

3. NEUROLOGICAL COMORBIDITIES AND SEIZURE DISORDERS

In addition to having serious problems in the mind, there are often serious diseases of the nervous system, the most severe of which is typically uncontrolled epilepsy. The high rate of co-occurrence has been reported in medical literature, and thus is believed that the underlying neurobiological and genetic reasons for this abnormality in brain development and synaptic connectivity have been identified [1]. Epilepsy in this particular group has some specific and serious diagnostic and treatment difficulties due to an atypical onset pattern and a great deal of difficulty in distinguishing actual electrographic seizures from core, repetitive behavioral movements visually [5].

Based on a large body of epidemiological data, the overall prevalence of epilepsy among people with autism spectrum disorder is relatively high compared to that in the general population, and most of

the risk factors are closely linked to other factors, such as co-occurring intellectual disabilities and severe language impairments [9]. Seizures can present in many forms in the clinic, including severe generalised tonic-clonic seizures, non-convulsive absence seizures, complex partial seizures, and focal seizures [5]. Another feature of the disease is a relatively wide age of onset. Unlike the general population of children, people with autism have shown a consistent pattern of two peaks in the onset of epilepsy: the first occurred in early childhood, and a second, more prominent peak appeared during adolescence and early adulthood [10]. Therefore, these two distributions require close observation of neurological changes and other signs in people with autism spectrum disorder [9].

It is also difficult to recognise the clinical signs of a seizure because of severe behaviour masking. Complex partial seizures or brief absence seizures can be mistaken for typical baseline autistic behaviour, such as inattention and prolonged staring, or repetitive motor stereotypes [5]. Stereotyped rhythmic movements are therefore prone to being mistaken for active motor seizures by caregivers and other less-experienced medical staff. To distinguish these severe neurological disorders from mild behaviours, more extensive data collection and examination of all areas in a timely manner are needed; for example, in an intensive care unit setting, detailed monitoring may be required for hours, or observation of behaviours in children and adolescents in group settings should be increased [10]. Confirmed co-occurring epilepsy in this person will alter their daily treatment and require new medication. Standard anti-epileptic drugs should be selected with extreme caution, as some common drugs may unintentionally worsen existing behavioural problems or interact negatively with other psychotropic drugs taken at the same time for pre-existing psychiatric conditions [1].

4. GASTROINTESTINAL DYSFUNCTIONS AND SOMATIC DISTRESS

In addition to severe neuropsychiatric disorders, most significantly, other frequent but less well-studied causes of death have been broadly classified as systemic diseases. A large number of new studies in recent years have shown that people with autism and others in the autism spectrum often have serious digestive problems that cannot be explained by stress and anxiety [4]. The clinical manifestations of these somatic problems are extremely varied, chronic, and have caused serious damage to a person's general health, nutrition and behaviour over an extended period [9]. Recent studies have explored how the microbiome-gut-brain axis is affected, and other ways this disruption may lead to problems in neurobehavioural behaviour, so the health of the gastrointestinal tract is now considered necessary for all patients.

The most frequently reported clinical manifestations of GI disorders in this vulnerable group are severe chronic constipation, acute abdominal pain, chronic non-stop diarrhoea, and painful gastroesophageal reflux disease [4]. Accurate display and identification of the above symptoms are extremely difficult due to severe communication disorders in people with the condition. Individuals with non-verbal or very limited speech cannot often tell their caregivers how exactly they are hurt at that moment [10]. Therefore, severe internal gastrointestinal disorders often present with abrupt, severe, and unexplained fluctuations in overt behaviour. An individual with acute abdominal pain may have a significant increase in self-injurious behaviours, unprompted aggressive outbursts directed at bystanders, severe daily mood swings, or an abrupt onset of sleeplessness [9].

Many people with autism have very limited and inflexible eating habits; thus, their overall health in a hospital setting may also be affected. Severe sensory aversion to specific textures, colours and odours of food may result in limited and unbalanced nutrition; thus, chronic constipation and vitamin deficiency are often caused or aggravated [4]. Thus, a self-perpetuating physiological loop has formed: continuous gastrointestinal (GI) symptoms lead to changes in food selection due to behaviour, and this further exacerbates the initial GI issues. Early recognition of these serious somatic symptoms by front-line medical personnel is required to raise the clinical suspicion index significantly [9]. In the face of a sudden decline in behaviour for an autistic person, a full-body examination must be conducted first to rule out serious health problems such as pain from illness in the gut, which can also

affect behaviour [10]. Address the basic gastrointestinal diseases in a timely manner to relieve both physical pain and emotional behaviour disorders, and this change is often prolonged [4].

5. SLEEP DISORDERS AND PHYSIOLOGICAL DISRUPTIONS

Chronic sleep disorders are undoubtedly one of the most widespread, clinically demanding and medically problematic co-morbidities in the spectrum, affecting a large proportion of the population at all ages [6]. Sleep disorders in this group are highly varied in their clinical manifestations, deeply ingrained, and severely impair the quality of life and mental health of both the people with sleep disorders and their primary caregivers [9]. Address or deal with these sleep disorders in a long-term care setting promptly; otherwise, chronic sleep deficiency can severely worsen the original problem of communication impairment and intensify associated mental illnesses in this group [1].

The typical clinical features of sleep disorders usually include severe sleep-onset insomnia, frequent and extended nocturnal awakenings, a substantial reduction in total sleep time, and early-morning awakenings that are not due to sleep disorders [6]. These daily disturbances are chronic in nature and often show a strong resistance to conventional behaviour-hygiene interventions. The reasons behind this problem are very complicated and often involve several factors, such as structural defects in the pathway for producing melatonin and serious disorder in circadian rhythms, as well as other severe behaviours and sensory issues; these may include intense neurological hyperarousal or hypersensitivity to environmental stimuli near bedtime [9]. Advanced polysomnography studies have also found that people in this age group often have highly fragmented sleep architecture and spend a relatively small amount of time in the essential restorative rapid eye movement sleep stage.

All of the downstream results of this clinical presentation are severe. Long-term sleep deprivation leads to serious fatigue during the day and can lower a person's normal levels of thinking, memory and learning [6]. In this particular group, the clinical signs of serious sleep loss often manifest as a severe and unmanageable increase in daily behaviour problems [1]. People with untreated sleep disorders generally have increased irritability during the day, a reduced capacity for frustration tolerance, increased motor hyperactivity, and a higher frequency of severe, prolonged emotional outbursts [2]. In addition, if a person does not get enough restorative sleep, then high-order thinking ability and emotions will be adversely affected, making it difficult for them to handle complex social relationships [9]. Given the serious symptoms of this disease, many types of medical care need to be implemented; such as strict behaviour modification therapy to regulate sleep, significant changes in the living environment to reduce sensory overstimulation, and specific drug treatments for sleep disorders that aim to regularise the body's sleep-wake cycle and mitigate damage from prolonged sleep disorders [1-2].

6. CONCLUSION

The clinical picture of this group of neurodevelopmental disorders includes many social and behavioural problems, but also many other health issues that often occur simultaneously. As shown in the above comprehensive summary, the clinical signs of these severe comorbidities are serious and multifaceted, thus affecting the course of life significantly. Psychiatric Overlap presents as prominent externalising behaviours and cognitive deficits that seriously hinder development. Serious neurological conditions, especially severe forms of epilepsy with an unusual bimodal age of onset, should not be confused with genuine life-threatening seizure activity and treated as mild stereotyped motor behaviours. Moreover, serious physical problems, such as gastrointestinal issues, may appear as sudden severe changes in behaviour because of the large communication difficulties in this group. At the same time, chronic sleeplessness may also cause the body to be unable to regulate well, leading to problems with thinking, feelings and family life.

The main problem that needs to be solved in the management of this neurodevelopmental disorder is diagnostic overshadowing. When inexperienced clinicians, educators and tired caregivers automatically attribute all physical symptoms, emotional outbursts and sudden cognitive declines to the main neurodevelopmental disorder, they fail to identify, diagnose and treat the actual, highly disruptive co-occurring conditions. A thorough understanding of the particular characteristics and fine features of the clinical manifestations described in this paper is required for all medical and educational personnel working with this vulnerable group. It is an urgent requirement of medical practice that all sudden, unexplained changes in a person's behaviour be considered an emergency communication indicating underlying mental health issues, and an all-encompassing clinical assessment should be immediately initiated to rule out internal distress.

Given the large-scale demands of this group, a substantial structural reform in the model of treatment will be required; that is to say, isolated, fragmented, and symptom-focused interventions will need to be replaced by an all-encompassing, multidisciplinary continuous-care system. Neurologists, expert gastroenterologists, specialised psychiatrists and dedicated behavioural therapists need to work together closely and seamlessly to carefully separate the overlapping symptoms and proactively develop all-encompassing, lifelong intervention plans.

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