Acute Stress Disorder: A General Overview

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Abstract: This article combines an overview of acute stress disorder (ASD) in the context of the pandemic period for Coronaviruses, collected through literature screening by Google Scholar. The article discusses what aspects of the diagnostic criteria for ASD have been changed from DSM-IV to DSM-V and the history of the diagnosis and summarizes the possible risk factors that contribute to ASD. Among the controversial issues related to PTSD, dissociative symptoms and ASD as a predictor of PTSD are among the more controversial issues. Among the treatment options for ASD, non-pharmacological treatments such as cognitive behavioral therapy (CBT) have generally been used to help patients with ASD. However, research on pharmacological treatments for ASD is particularly scarce. So finally, the article provides suggested research directions for ASD as pharmacotherapy and pathology. The article suggests that in the future, we can go deeper into research about the role of dissociative symptoms in ASD. Overall, one could be in a better position to understand this disease associated with trauma and stressors.

Keywords: acute personality disorder, trauma, DSM-5, treatment, PTSD

1. Introduction

Acute stress disorder (ASD) is a traumatic stress-related disorder that was first introduced as a new discrete disorder by the DSM-IV in 1994. In the DSM-IV, ASD was classified as an anxiety disorder. And then, the DSM-5 updated the data, and acute stress disorder (ASD) was reclassified as a trauma and stressor-related disorder [1]. One of the main reasons for adding ASD to the new diagnosis was to get patients with post-traumatic stress disorder (PTSD) access to medical care within a month. This is because the diagnostic criteria for PTSD are that the patient needs to maintain symptoms for more than one month. In addition, the diagnostic goal of ASD is to identify patients with acute trauma who subsequently develop PTSD [2]. In the DSM-V, there are five categories of diagnostic criteria for ASD; category A requires that the patient experience an event related to the trauma and stressor, such as A2 witnessing an event that occurred to another person, and category B require that patients who meet the diagnosis have nine or more symptoms after the traumatic event. These symptoms are classified into five categories. Intrusive, negative affect, arousal, dissociative, and avoidance symptoms [1].

Notably, in all diagnostic criteria for ASD, symptoms must be maintained for at least 3 to 1 month after the patient experiences a traumatic event [1]. Due to the transient or unstable nature of ASD, it is difficult to measure the epidemiological population rate of ASD with certainty, as the prevalence of ASD is variable [2], and it varies according to the proportion of survivors exposed to trauma.

The success rate in longitudinal studies of ASD as a predictor of PTSD was not high, leading the DSM-5 to rescind the decision to use ASD as a predictor of PTSD [1]. Although most patients with ASD eventually develop PTSD, In the beginning, many patients with PTSD do not meet the diagnostic criteria for ASD. Moreover, due to the heterogeneity of PTSD, it may be challenging to use ASD as a predictor of PTSD [1]. In this article, we review the diagnosis and information related to acute stress disorder and suggest future research directions for treatment and risk factors on this topic.

2. Methodology

This article focuses on research and literature reviews on acute stress disorder (ASD) collected through keyword searches in Google Scholar and the Stony Brook Library. The keywords included ASD, acute stress disorder, and ASD review. A total of 11 articles and websites that met the requirements were searched.

3. Results and Discussion

3.1. Diagnostic History of Acute Stress Disorder

In the history of diagnosis, it can be said that the diagnosis of ASD accession is due to PTSD. So the history of ASD diagnosis is always inseparable from the theme of PTSD. Specifically, the diagnostic criteria for PTSD require individuals to have a traumatic stress reaction that lasts at least 30 days. And this criterion leads to a non-specific diagnosis of adjustment disorder for many individuals in the first month after experiencing a traumatic event. Some studies have shown that it is almost difficult for individuals to obtain the only stress-related diagnosis [3]. This means that during the first month, the diagnosis available to many patients experiencing PTSD is non-pathological. This results in many patients not receiving timely treatment within the first month. The DSM-3 did not lower the duration requirement for PTSD because of concerns that patients diagnosed with PTSD had spontaneously recovered within a month or less [4]. Reassuringly, this shortcoming was addressed in the development of the DSM-4.

The diagnosis of acute stress disorder aims to distinguish pathological from conventional acute stress reactions by the relatively poor prognostic predictors of ASD [3]. The dissociative symptoms of ASD differ from PTSD, except that the two categories are not as precise as those of PTSD. For example, in the diagnostic requirements for PTSD, patients must experience at least three specified avoidance symptoms, three specified avoidance symptoms, and two specified arousal symptoms. In contrast, ASD requires only one intrusive symptom, and the list of potential symptoms is not limited by a minimum number [3]. Common symptoms of ASD are numbness, emotional dissociation, silence, loss of reality, depersonalization, psychogenic amnesia, re-experience of traumatic events, dreams and flashbacks, and avoidance of events; patients have symptoms of anxiety and impairment of at least one primary function. Most patients with ASD may experience headaches, sweating, stomach pain, fever, chest pain, and nausea.

The ASD diagnosis in the DSM-4 possesses a unique symptom response, the dissociative symptom response for ASD. Although amnesia and dissociative symptoms are not prerequisites for a diagnosis of the disorder, they are included in the diagnostic criteria for the disorder. In contrast, the dissociative theory of ASD posits that individuals control their awareness of the actual experience to minimize the negative emotions they experience resulting from the traumatic event. The theory posits that individuals can respond with negative awareness of traumatic experiences through dissociative responses. Dissociative reactions include, but are not limited to, altered perceptions, memory damage, or emotional detachment from the environment. The consistent suggestion is that individuals attempting to manage trauma-related severity anxiety through self-denial is the primary coping

strategy after trauma [5]. In the DSM-5, some diagnostic requirements were changed. Some studies have shown the limitations of the emphasis on dissociative symptoms of ASD in DSM-4 [2]. As a result, the diagnosis of ASD in DSM-5 does not need to meet specific cohort requirements, and some unnecessary symptoms have been reduced from those required to confirm the diagnosis. The criterion of including fear or helplessness to cope with trauma was removed from DSM-5 because this criterion would have prevented some individuals who did not respond to trauma from receiving a proper diagnosis [2].

3.2. Predictors Factors for Acute Stress Disorder

The various risk factors that have been studied specifically for ASD are fewer, and most are discussed about risk factors for PTSD. For example, the individual's previous history of having a diagnosis regarding psychiatric aspects of the illness, child abuse, low education, low IQ, the severity of the trauma, and social support [6].

The fear conditioning theory is the primary model of traumatic stress involved in ASD [7]. This theory suggests that people's fear when exposed to trauma is moderated by the phenomenon of solid associations between many trauma-related stimuli that trigger conditioned reflexes when a person is exposed to traumatic stimuli; the reactions that emerge in individuals may include symptoms that have to do with re-experiencing in the psyche the experience of the traumatic event, such as intrusive memories and physiological reactions at the time [8]. This involves a network of fears related to reactions to trauma, and the development of structures in fear theory represents the psychology of traumatic experiences through beliefs related to the extreme threat. The fear network can explain post-traumatic symptoms, such as intrusive memories, hyper-vigilance, and avoidance. In this model, two conditions can help restore trauma adaptation. The first condition enables the individual's cognitive schema to be modified but requires the activation of negative psychological responses to the traumatic event. Second, the individual needs to introduce new cognitions to challenge the cognitive schema associated with their fear. According to fear network theory, post-traumatic stress is positively affected if the appropriate treatment allows the individual to access the fear network and process emotional memories repeatedly. However, initially, the individual's trauma dissociation response may prevent the activation of fear structures leading to impaired emotional processing and the development of chronic post-traumatic stress disorder. Consistent with this theory, traumatized individuals are prone to exhibit confused and fragmented memories, with excessive memories of the trauma [5]. Thus, psychological factors are also a significant risk factor for ASD. Psychological factors in ASD are associated with dissociation, and in several retrospective longitudinal studies of infants, the disrupted attachment was found to interact with trauma exposure. After suffering the stress of caregiver departure, infants' internal working models cannot adapt to various psychological states, so their behavior becomes disorganized. This pattern may re-emerge during future stressful or traumatic events [6]. Therefore, disorganized attachment in infants may be able to serve as one of the predictors of ASD.

Another similar predictor involves cognitive mechanisms, and the model suggests that traumatic stress is generally relieved by the way traumatic memories are encoded and retrieved and by adaptive assessments of traumatic experiences and the self [7]. Thus, how survivors organize the impact of traumatic experiences on them may be a predictor of ASD. Many studies have shown that individuals with ASD are distorted in their assessment of vulnerability to future harm from traumatic events and the value of the individual [7]. Individuals have difficulty integrating traumatic events with their psychological states of self and others because they lack reflection on the psychological states of self and others [6]. Those with difficulty organizing and integrating traumatic events will be susceptible to ASD.

It is also important to note that vulnerability factors in ASD may put the risk of PTSD and subsequent post-traumatic stress disorder at increased risk. This is because the disease extension of ASD is often inextricably linked to the development of PTSD, and one of the core risk factors for ASD is peritraumatic dissociation [3]. Some studies have shown that an individual's response to dissociation immediately after experiencing trauma is one of the factors that can predict the subsequent development of PTSD [3].

Furthermore, during the Covid-19 pandemic, the psychological resilience of psychiatric hospital staff was negatively associated with ASD scores, i.e., the lower the psychological resilience, the higher the likelihood of ASD. According to this study, psychological resilience is a psychological immune protective system that effectively regulates and mobilizes an individual's feedback response during stressful events to restore the individual to homeostasis. During general stressful events such as the Covid-19 pandemic period, individuals with higher levels of psychological resilience are better able to deal with the personal effects of the negative psychological aspects of the stressful event. In the DSM-V, diagnostic criteria for ASD, such as dissociation and hyper-vigilance, are associated with psychological resilience factors. According to a study by Covid-19 on ASD prevalence and risk factors, the majority of nurses (64%) had ASD due to the Coronavirus disease pandemic. It therefore were at increased risk for acquiring a predisposition to post-traumatic stress disorder. In their sample of 448, self-learning disorders, age size, and self-efficacy to cope significantly predicted psychological distress. More specifically, older nurses possessed less likelihood of experiencing ASD or psychological distress than younger nurses. Individual coping self-efficacy is one of the protective factors for ASD, although more significant psychological distress tends to result in higher ASD diagnostic test scores [9].

3.3. Treatment of ASD

The primary treatment for ASD is cognitive behavioral therapy (CBT) [2]. Patients center their acute stressful symptoms around treating them with personal traumatic events. Such therapies generally include the empowerment of the individual to manage trauma, exposure therapy, anxiety management, and cognitive restructuring [7]. Some studies have shown that patients with ASD tend to prioritize their symptoms and stressful events when assessing the stressful events that occurred to them [2]. Mental health providers can predict subsequent PTSD through the patient's negative assessment and reflection on subsets after experiencing a traumatic event. A series of studies have shown that therapy with CBT, usually 5-6 sessions per week with the patient, can reduce the risk of prognostic PTSD [10]. This effect size is roughly around 0.75 through research [7]. Researchers have also attempted to introduce corrective information in exposure therapy to help patients with ASD. This has led to most treatment designs for ASD based on exposure and cognitive restructuring strategies [7]. This research supports the validity of CBT in the treatment of ASD. However, it is worth noting that while CBT can initially relieve symptoms in patients with ASD, there is no difference in effectiveness between those treated with CBT and those not treated with CBT at three years of long-term PTSD symptoms.

One controlled trial of ASD treatment was conducted by comparing which was more appropriate for patients with ASD, cognitive restructuring, or exposure therapy. Exposure therapy works by exposing patients to prolonged periods. Specific details, such as having participants recount their experiences when they were traumatized. These experiences they recount need to include all the emotional details and feelings they had at the time of the event. After they have completed their recollection of the event exposure, the researcher helps the participant to learn stress symptom prevention methods.

In contrast, the cognitive restructuring treatment approach focuses on psychological de-escalation and education about ASD. The researcher will help participants identify their negative thoughts and reactions to the traumatic event. Participants are required to monitor their thinking and emotional

state daily. The results of the study found that exposure therapy was able to intervene more effectively in chronic PTSD than cognitive restructuring. The exposure therapy group was twice as influential as cognitive restructuring [11].

Exposure therapy can elicit negative emotions when individuals experience traumatic events, such as anxiety. At the same time, their anxious beliefs are reduced through psychological correction, which can introduce the corrected psychology into the individual's trauma memory. This way, the individual can slowly master the negative mindset toward the traumatic event through exposure therapy. Exposure therapy involves the network model of PTSD, which suggests that individuals can adapt to the symptoms of a traumatic event when they repeatedly review the traumatic event in their minds and find no adverse outcomes [11].

In addition, in terms of pharmacology, ASD is less likely than many other psychological or psychiatric disorders to be able to demonstrate the effectiveness of pharmacotherapy for ASD. Because of the transient nature of ASD, pharmacological studies of PTSD are much more numerous than pharmacological studies of ASD about trauma-related disorders. Researchers hope to limit the subsequent progression of PTSD disorders through early interventions; for example, one study showed that PTSD is often characterized by a reduction in cortisol, which may involve a negative feedback mechanism used by the HPA system to reduce the stress response [12]. Thus, early intervention studies limited the progression of ASD to PTSD by attempting to increase cortisol levels in individuals who had experienced a traumatic event. One high dose of hydrocortisone was effective in reducing the severity of PTSD over three months compared to a placebo [7].

4. Conclusions

In conclusion, since ASD was added as a separate disease from ASD-IV, many ASD studies have emerged, and we have a basic understanding of the disease. By understanding ASD as a solution to the PTSD deficit, we also understand the relevance of ASD to PTSD. ASD and PTSD have highly overlapping diagnostic criteria. There are also inconclusive data from studies on dissociative symptoms. Therefore, explanations about the psychological and biological processes of ASD still need to be developed. And pharmacologically, it is more about pharmacological interventions to inhibit subsequent PTSD. Based on the current data, more research on pharmacological interventions is recommended to understand the psychopathological processes of ASD.

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