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Immune Dysfunction in Acute Poisoning by Drugs Affecting the Central Nervous System

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Relevance. The causes of widespread acute poisoning include the uncontrolled use of various medicines in everyday life, suicidal attempts, as well as the use of narcotic drugs for the purpose of drug intoxication (Rokhlina M.L., 2019; Nordstrom D. L. et al., 2017; Taheri F. et al., 2018). The severity of the condition of patients with acute severe poisoning by drugs affecting the central nervous system is due to pronounced dysfunctions of various organs and body systems due to the specific action of xenobiotics (Luzhnikov E.A. et al., 2016), as well as developing hypoxia (Livanov G.A. et al., 2014; Hashemian M. et al., 2016), leading to the development of life-threatening complications, which often determines the outcome of chemical trauma. A number of authors note that hypoxia in critical conditions causes the formation of a systemic inflammatory response consisting of increased production of pro-inflammatory mediators, activation of cytokines and kinins, increased vascular permeability, increased blood viscosity and microthrombosis (Chereshnev V.A. et al., 2019; Cavaillon J.M. et al., 2016; Ramakrishnan S. et al., 2019). Systemic inflammatory reaction and hypoxia are always associated with activation of proteolytic processes, coagulation and fibrinolytic systems (Sanotsky V.I., 2013; Alekhnovich A.V., 2020). Numerous authors have shown in their works that with the intensive and prolonged action of inflammatory factors, numerous disorders develop both at the cellular and organ levels (Gusev E.Yu. et al., 2018; Savelyev V.S. et al., 2017; Alberti C. et al., 2015). There are reports in the literature of widely used diagnostic algorithms for systemic inflammatory response syndrome in patients with intensive care, therapeutic, and surgical profiles, which allows early diagnosis of infectious complications and timely initiation of therapy (Zhevlakova Yu.A., 2017; Akimova V.N. et al., 2016; Ratzinger F. et al., 2015; Boehme A. K. et al., 2014). However, the possibility of their use in clinical toxicology has not been considered or investigated to date. There are no comprehensive studies on the problem of systemic inflammation in acute poisoning with drugs affecting the central nervous system, and methods for correcting this component of the pathogenesis of acute exotoxicosis have not been sufficiently defined. The mechanisms of pharmacological action on pathological reactions that are components of the systemic inflammatory reaction syndrome, in particular, such as proteolysis and the blood coagulation system, have not been determined, which seems relevant. There is no information about the role of systemic inflammatory reaction syndrome in the development of infectious complications in patients with acute poisoning by drugs affecting the central nervous system, which are one of the reasons for the increased duration of treatment of patients and the possible risks of death in the somatogenic phase of acute poisoning. Foreign scientists on the treatment of immune system disorders in acute poisoning by agents affecting the central nervous system.

Correction of immune dysfunction in acute poisoning by agents affecting the central nervous system (CNS) is a complex and important process in the treatment of such conditions. Poisoning with drugs acting on the central nervous system often results in a violation of the body's immune function, which can worsen the course of the disease. Various methods and approaches are used to correct immune dysfunction in such cases. Strategies for correcting immune dysfunction in poisoning affecting the central nervous system: 1. Detoxification and maintenance of organ function: - The primary task in poisoning is to detoxify the body and maintain the function of organs such as the kidneys and liver, responsible for clearing toxins from the body. 2. The use of immunomodulators: 743 - To correct

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immune dysfunction, immunomodulators can be used that stimulate the body's immune system to enhance its protective functions. 3. The use of antioxidants: - Antioxidants can help reduce the level of oxidative stress in the body caused by poisoning and strengthen the immune system. 4. The use of anti-inflammatory drugs: - In acute poisoning with drugs affecting the central nervous system, an inflammatory response often occurs. Anti-inflammatory drugs can help reduce inflammation and improve immune function. 5. Rehabilitation therapy: - After passing through the acute period of poisoning, it is important to carry out rehabilitation therapy aimed at rehabilitating the body and strengthening the immune system. 6. Monitoring and support: - It is important to constantly monitor the patient's condition, monitor immune parameters and, if necessary, adjust therapy to maintain normal immune function. When correcting immune dysfunction in acute poisoning, especially with drugs affecting the central nervous system, it is necessary to carry out comprehensive treatment, taking into account the specifics of each specific case of poisoning and the patient's condition. Proper and timely correction of immune dysfunction plays an important role in successful recovery from poisoning and improving the prognosis of the disease. In acute poisoning by agents affecting the central nervous system (CNS), correction of immune dysfunction plays an important role in the successful treatment and recovery of patients. The following are effective aspects of correction of immune dysfunction in acute poisoning by drugs affecting the central nervous system: Effective aspects of correction of immune dysfunction: 1. Detoxification and removal of toxins: - First of all, it is necessary to detoxify the body to remove toxins that can affect the immune system, and thereby reduce their negative impact. 2. Intensive care and maintenance of vital functions: - It is important to ensure a stable condition of the patient by monitoring vital signs and maintaining the functions of respiration, blood circulation and other vital systems. 3. The use of immunomodulators and immunostimulants: - The use of immunomodulators will help improve the functions of the immune system and enhance its protective abilities in conditions of acute intoxication. 4. Application of antioxidants: - Antioxidants can reduce oxidative stress in the body caused by poisoning and help restore immune function. 5. Maintaining the body's homeostasis: - Maintaining the balance and homeostasis of the body plays an important role in improving the functioning of the immune system and overall recovery. 6. Disease monitoring and recovery dynamics: - Regular monitoring of the patient's condition and recovery dynamics allows timely response to changes and correction of therapy. 7. Individual approach: - When correcting immune dysfunction, it is advisable to take into account the individual characteristics of the patient, the severity of poisoning and other factors for optimal treatment effectiveness. Correction of immune dysfunction in acute poisoning affecting the central nervous system requires an integrated approach and the inclusion of a variety of treatment methods. Effective restoration of the immune system, together with intensive drug therapy and detoxification, will play an important role in the successful and rapid recovery of the patient after poisoning.

Modern methods of treating immune dysfunction in acute poisoning by agents affecting the central nervous system (CNS) include an integrated approach aimed at restoring the immune system and improving the general condition of the patient. Here are some of the modern methods used to correct immune dysfunction in acute poisoning affecting the central nervous system.: Modern methods of treatment of immune dysfunction: 1. The use of immunoglobulins: - Immunoglobulins can be used to strengthen the immune system and improve the immune response in acute intoxication. 2. Immunomodulators and cytokines: - The use of immunomodulators and cytokines to stimulate various cells of the immune system and improve its functions. 3. Antitoxin therapy: - In case of severe poisoning by agents damaging the central nervous system, antitoxin therapy can help in binding and removing toxins from the body. 4. Immunotherapy: - The use of immunotherapy methods, including antibody therapy, can help improve immune function and response to intoxication. 5. Anti-inflammatory therapy: - The use of anti-inflammatory drugs can help reduce inflammation and improve the immune system's response to toxins. 6. Maintenance of vital functions and rehabilitation: Providing support for vital functions, intensive care and subsequent rehabilitation play an important role in restoring the immune system after poisoning. 7. Monitoring and individual

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approach: - Regular monitoring of the patient and adaptation of treatment methods to his response will help optimize the treatment process and achieve the best results. Modern methods of treating immune dysfunction in acute poisoning with drugs affecting the central nervous system are usually based on an individual approach to the patient, complex therapy to restore the immune system and the use of advanced technologies and treatment methods. It is important to carry out all measures under the supervision of qualified specialists and immunologists in order to achieve the best treatment results and recovery after acute intoxication with agents affecting the central nervous system. The history of treatment of immune dysfunction in acute poisoning by agents acting on the central nervous system (CNS) has a long evolution, starting from primitive methods to modern advanced approaches. Let's take a look at the key stages in the history of the treatment of immune dysfunction in acute poisoning with drugs affecting the central nervous system.: Stages of the history of treatment of immune dysfunction in poisoning affecting the central nervous system: 1. Ancient methods: - In ancient times, herbs, plants, and traditional treatments were used to combat the effects of poisoning, including methods aimed at strengthening the immune system. 2. Middle Ages: During the Middle Ages, various detoxification methods were used, including herbal and mineral remedies, as well as methods aimed at improving immune function. 3. Early Modern Times: - In the early Modern period, more systematic approaches to treatment began to develop, including the use of antidotes, homeopathy, and herbal remedies. 4. XX century: - In the XX century, antitoxins and specific drugs appeared to neutralize toxins, for example, for poisoning with drugs affecting the central nervous system. 5. The Modern Era: - Currently, there is a wide range of treatment methods, including the use of immunomodulators, immunotherapy, anti-inflammatory drugs and antioxidants to correct immune dysfunction in acute poisoning with drugs affecting the central nervous system.

Conclusion. Modern methods of treating immune dysfunction in acute poisoning with drugs that affect the central nervous system tend not only to neutralize toxins, but also to restore the functions of the immune system and the overall recovery of the body after poisoning. The development of new therapeutic approaches and treatment methods continues, which undoubtedly contributes to improving the survival rate and effectiveness of treatment in cases of acute poisoning with drugs affecting the central nervous system.

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