v. 5, n. 23, 2025

International Journal of Health Science

THE IMPORTANCE OF RECOGNIZING PICS SYNDROME (POST INTENSIVE CARE SYNDROME) IN CLINICAL PRACTICE

Acceptance date: 09/06/2025

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Abstract: Post Intensive Care Syndrome (PICS) affects patients who survive prolonged stays in Intensive Care Units (ICUs), causing physical, cognitive and emotional complications. The main symptoms include muscle weakness, cognitive deficits, anxiety, depression and post-traumatic stress disorder, which can persist for months or even years after discharge. These effects compromise patients' quality of life, hindering their social and professional reintegration. Early identification of PICS is essential for proper management and the implementation of prevention and rehabilitation strategies. Risk factors such as advanced age, female gender and the severity of the disease (assessed by the APACHE score) are important determinants for the development of the syndrome. In addition, early mobilization, physical and cognitive rehabilitation, and ongoing psychological support are key to minimizing the long-term impacts. The syndrome not only affects patients, but also their families, who face stress and difficulties related to post-discharge care. Training healthcare professionals to recognize and treat PICS is crucial to improving recovery and quality of life for survivors. Thus, a multidisciplinary approach is essential for managing the syndrome and ensuring a more effective recovery.
Keywords: Intensive care unit; Rehabilitation; Semi-intensive care; Hospital discharge.

INTRODUCTION

Post Intensive Care Syndrome (PICS) is a condition that affects patients who have survived critical illnesses and prolonged stays in the Intensive Care Unit (ICU), significantly impacting their health in the physical, cognitive and emotional spheres. Although advances in treatment and the notable reduction in short--term mortality are important steps in intensive care medicine, the adverse conditions present in the ICU environment have long-lasting consequences for patients. Among the related

complications are muscle weakness, cognitive deficits, anxiety, depression and post-traumatic stress disorder. These symptoms have the potential to persist for months or even years after discharge from hospital.

Patients who have outgrown the ICU often face significant challenges to their quality of life, which hinders their social and professional reintegration. It is therefore essential that post-ICU care includes constant monitoring and rehabilitation programs. Early identification of symptoms is key to improving long--term prognosis [1].

Recent research indicates that although most patients facing PICS make a gradual recovery, many continue to struggle with substantial physical and mental difficulties. These challenges affect not only the patient, but also their ability to resume everyday activities, such as working and maintaining social relationships. The complexity of the effects of PICS requires that post-ICU care be multifaceted and involve an interprofessional team capable of addressing all dimensions of the problem. In addition, ongoing psychological support, along with physical and cognitive rehabilitation interventions, is essential to promote a full recovery. [2]

The consequences of a prolonged stay in the ICU not only affect the patient, but also have a major impact on their family members, who often deal with overload and stress due to a lack of preparation for post-discharge care. Early recognition of the signs of this condition is key to implementing prevention and treatment strategies, avoiding complications and improving long-term outcomes. However, despite the importance of this approach, detection still represents a challenge in medical practice, with a shortage of studies on heterogeneous critical populations and the need to train health professionals to identify signs in the early stages. [2,3]

In view of this, it is crucial to prioritize the training of professionals in the management of PICS, in order to optimize patient recovery and minimize negative impacts, both on the health of individuals and on healthcare costs. This raises relevant questions about how to adopt effective strategies for the early recognition of PICS and what obstacles health professionals face when dealing with this complex condition.

METHODOLOGY

This is a literature review study with a qualitative and quantitative approach, considering relevant scientific articles with a publication period of no more than 5 years. In this case, the search period will be limited to articles published between 2019 and 2024, prioritizing the most recent ones to ensure that the information is up to date and that the studies are relevant to the current context of PICS. The following databases were used to search for the articles: PubMed, Scielo, BVS (Virtual Health Library), OJS (Open Journal Systems).

The study included articles dealing with Post Intensive Care Syndrome (PICS) and its physical, cognitive and emotional impacts, as well as studies dealing with risk factors for the development of the syndrome and those investigating the early identification of PICS, its prevention and management strategies. We also only considered peer-reviewed articles published in indexed journals, carried out with populations of critically ill patients in intensive care units (ICUs).

On the other hand, articles that did not deal specifically with Post-Intensive Care Syndrome or that approached the subject in a superficial way were excluded. Studies carried out with non-critical populations, such as patients undergoing outpatient treatment or with illnesses not related to intensive hospitalization, as well as those dealing with PICS in contexts outside the ICU, such as general hospitals or intermediate care units, were also disregarded.

RESULTS

In order to analyze the selected articles on Post Intensive Care Syndrome (PICS), a table was created to collect and summarize the data obtained. The aim of this table was to organize the information collected in a structured way and facilitate the creation of a database.

In **Chart 01**, the articles were grouped according to a structured script, with the following information: author/year, title, journal, type of study and main results, conclusion.

AUTHOR/ YEAR	TITLE	PERIOD	TYPE OF STUDY	MAIN RESULTS	CONCLUSION
MAGALHÃES 2023	Post Intensive Care Syndromes In Contemporary Physiotherapy Contributions.	Academia .Edu	Theoretical Essay	Prolonged stay in the ICU can lead to development of Post Intensive Care Syndrome (PICS), which affects patients' quality of life, causing a decrease in physical status, cognitive alterations, anxiety, depression and post-traumatic stress. Physiotherapists play a key role in the prevention and treatment of kinetic-functional disorders, with interventions such as early mobilization. For patients with PICS, the Physiotherapy can help with rehabilitation, allowing them to resume their daily and work activities independently, improving their quality of life.	Given the relevance of Post-Care Syndrome Intensive (PICS) and their impact on patients' physical, psychological and social well-being, it is essential to adopt strategies to prevent them. The role of the physiotherapist is crucial in this process, focusing on functional assessment and prophylactic measures during hospitalization to reduce the adverse effects of the ICU. After discharge, physiotherapists also play an important role in physical rehabilitation and the return of patients to their daily and work activities. However, in Brazil there is still no consolidated reality in this respect. For this reason, studies investigating protocols for the prevention and monitoring of PICS during and after discharge should be carried out hospitalization is essential in order to improve the quality of life of post-ICU patients.
Tejero-Aranguren J 2022	Incidence and risk factors associated with post-intensive care syndrome in a cohort of critically ill patients.	Scielo	Cohort study	The study described is a prospective cohort study that aims to analyze the incidence and risk factors for the development of post-intensive care syndrome (PICS) in critically ill ICU patients. It focuses on assessing changes in the physical, cognitive and mental spheres after hospital discharge, as well as identifying variables related to the development of the syndrome.	Post-intensive care syndrome (PICS) affects up to 50% of patients who survive a serious illness, highlighting the importance of specialized follow-up after discharge from the ICU. Risk factors such as prolonged sedation, length of mechanical ventilation and polyneuropathy are modifiable and should be the target of preventive strategies. Early identification and targeted treatment can minimize physical, cognitive and mental sequelae Adapted approaches are essential for each sphere of PICS. O post ICU is crucial to improve quality of life and reduce the impact of the syndrome.

CISNEIROS S. 2022	Post-Intensive Care Syndrome: how to screen for it and reduce its damage?	Brazilian Journal of Health Review	Bibliographic review	The main results indicate that Post Intensive Care Syndrome (PICS) impacts patients cognitively, psychiatrically and physically. After discharge from the ICU, many patients present cognitive difficulties, psychiatric disorders such as anxiety and depression, and muscle weakness. Predictive factors, both modifiable and non-modifiable, influence the development of the syndrome. Primary Health Care is crucial for the early screening and management of PICS, promoting a better quality of life for patients. Early diagnosis, using validated tools, is essential for proper management of the syndrome.	Post Intensive Care Syndrome (PICS) emerges as as a consequence of the increased survival of critically ill patients, generating physical, cognitive and psychiatric sequelae. Factors such as age, gender and the severity of the disease are key to its development. Early recognition and a multidisciplinary approach, with a focus on early mobilization, appropriate sedation management and psychological support, are fundamental to minimizing the impacts of the syndrome. In addition, post-discharge follow-up and primary care are essential to improve quality of life survivors' lives and optimize intensive care.
Yanagi N 2021	Post-intensive care syndrome as a predictor of mortality in critically ill patients	Pubmed	Cross--sectional study	The study investigated the relationship between Post Intensive Care Syndrome (PICS) and long-term mortality in critically ill patients. The study involved 248 patients with an ICU stay of more than 72 hours, and identified that 132 of them had PICS. Among the components of PICS, 34% of the patients were physically disabled, 19% suffered cognitive impairment and 23% had depression. The analysis showed that PICS was associated with overall mortality, but this association was mainly attributed to physical disability and cognitive impairment, while depression had no significant impact on mortality.	Post-Intensive Care Syndrome (PICS) has been instrumental in raising awareness of the sequelae of critical illnesses, but its association with long-term mortality is more related to physical disability and cognitive impairment than to depression. These findings indicate that, in order to improve the treatment of patients with PICS, future interventions should focus on specific conditions of the syndrome, rather than treating PICS comprehensively.
Vrettou CS 2022	Post-Intensive Care Syndrome in Survivors of Critical Illness, including COVID-19 Patients	Pubmed	Bibliographic review	Advances in intensive care medicine have improved the survival of critically ill patients, but many develop post-intensive care syndrome (PICS), which affects physical, cognitive and mental conditions after hospitalization. The prevalence of PICS is still uncertain, but it is common, especially in COVID-19 survivors. In addition In addition, patients' relatives can also suffer from the stress of the experience, and are classified as family PICS (PICS-F). The multidisciplinary approach is essential for the treatment of PICS, aimed at the prevention and early management of sequelae, with the aim of improving the quality of life of ICU survivors.	Post-intensive care syndrome (PICS) affects ICU survivors with physical, cognitive and psychological sequelae, impacting their quality of life and that of their families. The COVID-19 pandemic has aggravated this situation. Despite technological advances, there are still many gaps in the understanding of PICS, and more studies are needed to improve the treatment and recovery of patients.

Gomes MJ de A 2022	Repercussions long-term psychological time after discharge from intensive care: a narrative literature review	Research Society and Development	Narrative literature review	This study addresses the question the psychological problems that patients face after being discharged from Intensive Care Units (ICUs). Although ICUs are environments designed to care for critically ill patients who are at imminent risk of death and require continuous monitoring, hospitalization in these units can generate a great deal of stress, especially due to the general lack of knowledge about how these environments work. This can result in serious long-term psychological problems, such as depression, anxiety and post-traumatic stress disorder.	Therapy Units Intensive Care Unit (ICU) are essential, but can cause long-term psychological effects, such as depression and anxiety, due to stress, the use of sedatives and invasive procedures. Medical and psychological follow-up, with active listening and a reduction in unnecessary interventions, is crucial to minimizing these impacts and improving patient recovery.
Queiroga A de O F 2024	Conference on Interdisciplinary Care for Patients with Post-Intensive Care Syndrome.	Anatel	Systematic reviews	Post Intensive Care Syndrome (PICS) involves physical, cognitive and mental dysfunctions that affect most patients after discharge from the ICU. Muscle weakness, impairment and Cognitive impairment and psychological issues such as anxiety, depression and post-traumatic stress disorder are the main consequences. Factors such as age, delirium and disease severity increase the risk of PICS. O treatment involves interdisciplinary care and physical rehabilitation, as well as tools to monitor mental and cognitive health. The REAB Project post-COVID-19 has been instrumental in ensuring safe discharge and supporting the recovery of patients with critical illness sequelae.	Post Intensive Care Syndrome (PICS) affects patients after discharge from the ICU, with long-term physical, cognitive and mental impacts. The interdisciplinary approach, including rehabilitation and mental health monitoring, is essential to prevent and treat these effects.
Smith S 2022	Post Intensive Care Syndrome	PubMed	Systematic Review	Post Intensive Care Syndrome (PICS), which involves physical, cognitive and mental declines in ICU survivors, as well as psychological problems such as anxiety, depression and PTSD, affecting both patients and their families. The PICS-F describes the impacts on the mental health of close family members. It also highlights the increased use of the pediatric ICU (PICU), with more survivors facing recovery challenges such as school reintegration and social difficulties, in addition to the financial consequences for parents. The PICS-pediatric model includes a social component for all family members.	The effective implementation of the ABCDEF protocol to prevent Post Intensive Care Syndrome (PICS) depends on a multidisciplinary approach, involving professionals such as pain management teams, respiratory therapists, nurses, pharmacists and other hospital staff. Constant communication with family members is also essential. Collaboration between all sectors improves patient recovery and family support, minimizing long-term complications associated with ICU stays.

Ekong 2024	From the Intensive Care Unit to Recovery: Managing Post Intensive Care Syndrome in Critically Ill Patients.		Integrative Review	Post-ICU syndrome (PICS) affects survivors of serious illnesses, causing physical, cognitive and mental deficits such as weakness, cognitive problems, depression and anxiety. Prevalence can vary between 50% and 80%, with effects lasting for years and impacting quality of life and reintegration social. Treatment includes rehabilitation and psychological support, with exercise therapy being an effective approach. Research into PICS seeks to improve understanding and management of this syndrome, with a view to better outcomes for patients after discharge from the ICU.	The syndrome post-ICU (PICS) affects patients with physical, cognitive and emotional problems after prolonged hospitalization. Its origin may be related to muscle weakness, vascular damage and immune suppression. The elderly and women are most vulnerable, especially those with ARDS and prolonged mechanical ventilation. Interventions such as early mobilization and psychological therapy can improve outcomes and reduce costs. More research is needed to improve the treatment and early detection of PICS.
Schwitzer E 2023	Survival ≠ recovery	Science Direct	Narrative Review	PICS affects patients who survive critical illness, resulting in physical, psychological and cognitive impairments. The review describes the clinical manifestations, assessment and management of the syndrome, as well as considering the impact of social determinants of health on recovery. It also highlights the importance of multidisciplinary clinics in the treatment of PICS, suggesting that this model can improve the care of patients who have survived the ICU.	The analysis suggests that post-ICU recovery programs that promote interaction between clinicians and survivors can bring significant benefits to patients' well-being. It also highlights the importance of considering the feasibility of low-cost feedback between patients and doctors, with a view to improving patient care results after discharge from the ICU.
Cagino LM 2022	Survival after critical illness and post-intensive care syndrome	PubMed	Cohort study	Improvements in intensive care medicine have increased the number of ICU survivors, but these patients face difficulties after discharge. Post-intensive care syndrome (PICS) encompasses symptoms in the cognitive, physical and mental areas. Factors such as pre-existing conditions and the ICU stay itself are risks for the development of PICS. O treatment requires a personalized and interdisciplinary approach, and future research should focus on the prevention, identification and management of this syndrome.	Advances in intensive care medicine have increased survival, but patients face challenges after discharge. Post-intensive care syndrome (PICS) helps to identify and treat these difficulties. Further research is essential to improve the management of long-term sequelae.
Wong IMJ 2020	Sedation and Delirium in the Intensive Care Unit - A Approach Practice-Based Learning	PubMed	Qualitative study	It addresses the guidelines for sedation in critically ill patients, highlighting limitations in guidelines and the definition of light sedation. It proposes strategies such as early light sedation, the use of analgesia without excessive sedation, a multimodal approach and the use of dexmedetomidine to improve outcomes. The conclusion emphasizes the need for a practical scoring system and a balanced approach to optimize patient care.	We need to improve a scoring system for sedation that takes into account the time. Light sedation from the onset of critical illness is essential to optimize sedation, reduce mortality, shorten ventilation time and prevent delirium.

DISCUSSION

ANALYSIS OF THE THEORIES AND RISK FACTORS ASSOCIATED WITH POST INTENSIVE CARE SYNDROME (PICS)

Post Intensive Care Syndrome (PICS) has become a growing concern in intensive care medicine and has gained increasing attention in the medical literature due to the significant impact it has on the quality of life of patients who have survived an ICU stay. Several studies show that the incidence of PICS varies according to patient profile, with factors such as the severity of the illness, length of stay in the ICU and the presence of comorbidities influencing the prevalence of this syndrome.[3]

The syndrome continues to affect the quality of life and functional capacity of patients after discharge from ICUs, despite the reduction in deaths. Predictive factors of the syndrome, such as cognitive, psychiatric and physical impairments and concludes that identifying modifiable factors during hospitalization can improve the quality of life of survivors. [3]

PICS is a complex condition that can be influenced by a variety of factors, which can be classified as modifiable and non-modifiable. Among the non-modifiable factors, age and gender play a significant role in the risk of developing the syndrome. Studies indicate that advanced age is an important risk factor, with the prevalence of PICS increasing in patients aged 57 and over. The incidence of PICS is higher in this age group, and is more frequent in older patients due to the physiological decline and greater comorbidity associated with this population [(2).]

In addition, the female sex is also a relevant risk factor for the development of the syndrome. Women admitted to ICUs seem to be more susceptible to developing post-ICU sequelae, which may be related to biological and social aspects that influence recovery.[2]

An important factor is the assessment of the severity of the illness, which is often carried out using the APACHE (Acute Physiology and Chronic Health Evaluation) score. The APACHE is a tool widely used in ICUs to assess the severity of patients' clinical condition, and is a crucial predictor of long-term complications. This score takes into account physiological variables, the presence of chronic diseases and the patient's general health status, making it possible to identify those at greater risk of developing complications, including PICS. Studies indicate that patients with higher APACHE scores are more likely to present post-ICU damage, such as cognitive and physical deficits, which characterize PICS [4].

RELATIONSHIP BETWEEN LENGTH OF STAY AND DEVELOPMENT OF POST INTENSIVE CARE SYNDROME (PICS)

The length of stay in an Intensive Care Unit (ICU) has been identified as one of the main risk factors for the development of Post Intensive Care Syndrome (PICS). Patients who stay for longer periods in ICUs are more susceptible to developing cognitive, psychiatric and physical deficits, which are central characteristics of this syndrome. The literature suggests that the length of intensive care stay is directly related to the severity of post-discharge sequelae, with a significant increase in the prevalence of PICS as the length of stay increases. [5]

The incidence of post-intensive care syndrome affects one in two patients who survive a serious illness, patients who have spent more than 17 days in intensive care units.

Intensive care have a substantially higher chance of experiencing physical (12.6%), psychological (19.5%) and cognitive (4.6%) dysfunction after discharge. The risk factors vary according to the area analyzed.[2]

Physical impairment is related to age, the presence of polyneuropathy on discharge from the ICU, as well as variables such as length of stay, sedation and invasive mechanical ventilation. Cognitive impairment is associated with the severity of the condition at the time of admission and the length of hospital stay. No specific factors were found that directly influence damage to mental health [2].

The manifestations of PICS range from mild to severe and can affect everything from the performance of complex tasks to the ability to carry out daily activities. The main cognitive domains affected are attention, memory, mental processing speed and executive functions. Even with a short stay in the ICU, cognitive disorders can arise, with memory and executive function being the most frequently affected, directly impacting recovery and the return to daily activities. [3]

Publications on Post Intensive Care Syndrome (PICS) have focused mainly on specific pathologies, often within the context of multicenter studies with other objectives. Among the most studied conditions are Acute Respiratory Distress Syndrome (ARDS) (7,8) and sepsis (9,10). [2]

The pathogenesis of PICS is multifactorial, involving metabolic and neuroendocrine alterations. Although some risk factors cannot be modified, interventions during ICU stay can reduce or prevent certain effects. The main risk factors for PICS include older age, female gender, history of mental health problems, length of stay, severity of illness, negative ICU experiences and delirium. Although age, gender and mental health problems cannot be changed, they can help identify patients at greater risk of developing the syndrome [6].

CLINICAL MANIFESTATIONS OF POST INTENSIVE CARE SYNDROME (PICS) AND IMPACTS ON PATIENT RECOVERY

The results of the articles reviewed show that the consequences of PICS can be wide-ranging, affecting not only physical health, but also the mental and cognitive health of patients. Muscle disorders play an important role, especially ICU-Acquired Muscle Weakness (UAMW). This disorder is common in patients who have undergone prolonged stays in intensive care units and can significantly compromise the physical and functional recovery of these patients. ICUF is often associated with factors such as prolonged immobilization, invasive mechanical ventilation and the use of sedation, directly affecting patients' ability to carry out daily activities after discharge from hospital. [7]

Early detection and proper management of this condition are crucial to improving patients' quality of life. The diagnostic test used to detect FAUTI is the manual muscle strength test, known as the Muscle Research Council (MRC) Scale, which assesses muscle strength in patients. The total score on this scale ranges from 0 to 60 points, with a score of less than 48 points indicating the presence of muscle weakness [7].

The clinical manifestations of FAUTI can include difficulties in weaning from the ventilator, problems with speech or swallowing, as well as generalized weakness in the limbs. FAUTI is divided into muscle deconditioning, critical illness-related polyneuropathy and critical illness-associated myopathy, the latter two of which can occur simultaneously, forming critical illness neuromyopathy [8].

Skeletal muscle atrophy due to disuse, together with factors such as inflammatory mediators, electrolyte imbalances, endocrine dysfunction and inadequate nutrition, often contribute to myopathy, compromising

protein synthesis and favoring proteolysis. Vitamin D deficiency, common in the general population and aggravated by lack of sun exposure in hospitalized patients, may also be an underestimated and reversible factor for muscle weakness in the ICU. In addition, microvascular ischemia and other factors probably influence the neuropathic aspects.[9]

The cognitive impairment of PICS can involve deficits in memory, attention and processing speed, persisting for years after discharge. Risk factors include episodes of hyperglycemia or hypoglycemia, as well as previous cognitive deficits. Studies indicate that prolonged periods of hypoxia in the ICU and delirium are strongly related to long-term cognitive deficits, highlighting the duration of delirium as a critical factor in the risk of later cognitive impairment.[8]

Delirium is strongly related to long-term cognitive impairment, even after taking into account factors such as age, educational level, sedation, severity of illness and previous cognitive function. The prolonged duration of delirium is especially associated with a worsening in global cognition and executive functions after one year in patients surviving critical illness.[10]

Interventions such as the ABCDEF protocol, which includes the assessment of delirium, daily tests for spontaneous awakening and breathing, avoidance of excessive or inappropriate sedation, early mobilization and family support, have been shown to be effective in reducing delirium and the risk of future cognitive deterioration.[10]

The psychological impact on patients indicates that the stress of an ICU stay, caused by prolonged sedation or delirium, can lead to long-term consequences such as anxiety disorders, depression and post-traumatic stress disorder (PTSD). These psychological problems can further impair the physical recovery process and the patient's reintegration into their routine. Risk factors for mental health problems after ICU admission include a history of psychiatric illness and being female.[11]

In addition, the use of sedatives and limited memory of the ICU experience increase the risk of subsequent mental difficulties, traumatic memories and nightmares during hospitalization can be signs of problems that persist after discharge. There are also studies that suggest that episodes of hypoglycemia and hypoxia not only increase the risk of cognitive deficits, but can also contribute to depressive symptoms in ICU survivors.[12]

The syndrome also significantly affects patients' families, as pointed out in articles on the impact of family PICS (PICS-F), being a condition that requires not only treatment for the patient, but also support for family members. This reinforces the need for comprehensive care that takes into account the patient and their support network.[13]

Risk factors for the development of PICS-f among family members include being female, younger age, less education and a history of mental disorders. Spouses of ICU patients and single parents of seriously ill children are particularly vulnerable, but family members of pediatric ICU patients are less likely to develop the syndrome than those of adults.[13]

There is disagreement about whether family involvement in medical decisions can protect against or increase the risk of PICS-f. Cultural factors may influence these results, for example, a French study showed that making medical decisions, especially about end-of-life care, increased the risk of PICS-f. In contrast, a study in the USA indicated that family members with a more passive role in decision-making were more likely to suffer negative mental sequelae, these differences may be explained by the distinct cultural approaches to shared decision-making between the two countries. [14]

DIAGNOSIS OF POST-INTENSIVE CARE SYNDROME: ASSESSMENT TOOLS AND CLINICAL RECOMMENDATIONS

The diagnosis of PICS involves a comprehensive assessment of the physical, cognitive and psychological consequences that patients may experience after a prolonged stay in an Intensive Care Unit (ICU). Studies highlight that early identification of deficits in these areas is crucial for proper management and improving patients' quality of life after discharge. Specific assessment tools are recommended to detect these sequelae, and these tools vary according to the guidelines of different societies [15].

In 2020, the Society of Critical Care Medicine recommended the use of the Montreal Cognitive Assessment (MoCA) to assess cognition, the HADS for symptoms of anxiety and depression, and the IES-R or IES-6 for the diagnosis of Post-Traumatic Stress Disorder (PTSD), in addition to tests such as the 6-minute walk test for physical disabilities.[16]

In 2023, the Japanese Society of Intensive Care Medicine suggested a broader approach, including the 6-minute walk test, the MRC scale, the grip strength test, and for cognitive function, the MoCA, MMSE and SMQ. For mental health, they indicated the HADS, IES--R and PHQ-9. The assessment of activities of daily living should include the Barthel Index, IADL and FIM, and quality of life can be measured by the SF-36, SF-12, EQ-5D-5L, 3L and VAS. These tools are essential for properly diagnosing and intervening in PICS [16].

DIAGNOSTIC CRITERIA FOR POST INTENSIVE CARE SYNDROME (PICS)

Post-Intensive Care Syndrome (PICS) encompasses a series of physical, cognitive and psychological deficits that can persist even after recovery from the acute illness, impacting the patient's quality of life and functionality. For the diagnosis and effective management of PICS, it is important to consider the diagnostic criteria for the most prevalent psychological conditions among patients, such as Post-Traumatic Stress Disorder (PTSD), depression and anxiety disorders.[17]

1. Post-Traumatic Stress Disorder (PTSD)

PTSD is a common condition following ICU experience, characterized by four categories of symptoms: intrusive symptoms, avoidance behaviors, changes in mood and thoughts, and changes in reactivity. According to DSM-5, for a diagnosis of PTSD, the symptoms must last for at least one month and cause significant suffering or impairment of the patient's daily activities. In addition, the patient must have at least one avoidance symptom [18].

2. Depression

The diagnosis of depression is established when the patient has persistent feelings of sadness, hopelessness and loss of interest in previously pleasurable activities. Other criteria include changes in sleeping or eating patterns, tiredness and difficulty concentrating. For a diagnosis of depression to be confirmed, symptoms must last for at least two weeks, with at least one significant symptom of sadness or loss of interest. [19]

3. Anxiety Disorders

Anxiety disorders are characterized by excessive worry, nervousness, irritability, muscle tension, concentration problems and sleep disturbances. Generalized Anxiety Disorder (GAD) is distinguished by continuous symptoms of anxiety that last for months or even years and interfere with daily activities. The diagnosis of GAD requires the presence of persistent symptoms, unlike occasional anxiety [19].

These criteria are fundamental for identifying and adequately treating the psychological aspects of PICS, improving the prognosis and quality of life of patients facing these conditions after discharge from the ICU. [19]

PREVENTION OF POST-INTENSIVE CARE SYNDROME: EARLY INTERVENTION AND REHABILITATION STRATEGIES

The importance of interdisciplinary monitoring and physical rehabilitation is highlighted by several authors as fundamental strategies for mitigating the effects of PICS. Early interventions, such as early mobilization, have been shown to be effective in preventing and minimizing physical sequelae. Prevention of the syndrome is facilitated by the ABCDE-FGH package, which addresses risk factors such as sedation, delirium and immobility [20].

The package includes airway management, pain control, stopping ventilation, adequate sedation, delirium prevention and early mobility. The letters FGH add family involvement strategies, effective communication in the transfer of care and education about PICS. These integrated approaches aim to improve recovery and prevent long-term complications in ICU patients. [20]

The focus of physical rehabilitation in the ICU is to improve patients' quality of life by helping them maintain or recover their daily activities. Early rehabilitation, as recommended by Japanese guidelines, can be an effective preventative measure, especially for patients with sepsis or other critical conditions. Although studies show that physical rehabilitation can reduce ICU-acquired weakness, its effects on mental health or the duration of delirium are still unclear, and more research is needed into its impact.[21]

Physical rehabilitation should be started early during the ICU stay, although the exact timing of the intervention may vary, with some studies suggesting that it should be started within a week. It is more effective to prevent PICS symptoms from admission to the ICU than to treat them intensively after discharge. Physical rehabilitation activities include movements such as sitting, standing, walking and passive exercises, and although some interventions, such as neuromuscular electrical stimulation, are not recommended, higher intensity rehabilitation seems to have a positive impact on quality of life.[22]

Studies highlight the importance of a preventive approach and continuous follow-up after discharge, with a focus on monitoring patients' physical, cognitive and emotional aspects. The role of the physiotherapist is seen as crucial, not only during hospitalization, but also in the rehabilitation process after discharge[22].

CHALLENGES IN RECOGNIZING AND MANAGING PICS IN MEDICAL PRACTICE

The recognition of Post Intensive Care Syndrome (PICS) faces several challenges due to the complexity of its symptoms and the lack of a single classification in the ICD-10 (International Classification of Diseases, 10th edition), making it difficult to implement effective screening measures. In addition, the scarcity of information and awareness about the syndrome among health professionals, patients and caregivers is a significant obstacle to early identification and appropriate treatment.[23]

Many clinicians are still unaware of the diagnosis of PICS, which prevents a proper approach to improving patients' quality of life after discharge. Patients may also be hesitant to report symptoms, fearing being misinterpreted or due to a lack of understanding about the treatment options available.[23]

Another challenge is the lack of information about PICS in clinical practice. A study carried out in a medical institution identified lack of knowledge as the main factor hindering improvement in the quality of life of patients affected by the syndrome. This study revealed that both patients and caregivers face difficulties in remembering and understand their experiences in the ICU and their expectations after discharge, which leads to isolation and difficulties in seeking help. In addition, healthcare professionals face challenges in identifying and treating the syndrome, which hampers their ability to improve the recovery of vulnerable patients [24].

These obstacles in the early recognition of PICS demonstrate the urgent need to raise awareness and provide more information about this condition to both healthcare professionals and patients and their caregivers, with the aim of improving care and quality of life after discharge from the ICU. [25]

STRATEGIC INTERVENTIONS IN THE ICU FOR THE PREVENTION AND MANAGEMENT OF POST INTENSIVE CARE SYNDROME (PICS)

The ABCDEFGH set, proposed at the second PICS conference in 2012, is an interprofessional, patient-centered approach focused on optimizing the recovery of critically ill patients. It encompasses pain assessment and management, awakening and spontaneous breathing tests, appropriate choice of sedation and analgesia, delirium assessment and management, early mobilization, family involvement, effective communication in the transfer of care and education about PICS.[8]

Studies have shown that this strategy reduces the risk of PICS by optimizing pain control, avoiding excessive sedation, reducing the incidence of delirium and speeding up patient recovery. In addition, implementing this approach from the earliest stages of treatment has been shown to increase survival rates and reduce post-ICU complications [26].

The implementation of supportive interventions has also proved essential. Early psychological support is crucial, as critically ill patients often face symptoms such as agitation, irritability and depression due to the unfamiliar ICU environment. Rapid assessment of mental state and interventions such as psychoeducation, music therapy and access to electronic devices have the potential to reduce emotional distress and decrease the chance of developing PICS in survivors. [27]

Another important aspect is nutritional support, as malnutrition is common in these patients due to increased catabolism and reduced nutrient absorption. Malnutrition can lead to serious clinical complications, so providing early nutritional support is essential to improve clinical outcomes and reduce the risk of PICS.[28]

In addition, the ICU environment plays a significant role in patients' recovery. High noise intensity and constant lighting can aggravate conditions such as insomnia and delirium. Adopting measures to reduce noise levels and adjust lighting can improve the quality of the environment and, consequently, patient recovery. [29]

Finally, the literature suggests that, in addition to clinical interventions, it is essential to recognize the current problem in order to implement preventive approaches and interdisciplinary follow-up to minimize the consequences of the syndrome. Continued research and the implementation of care protocols will be essential to improve recognition of the syndrome in order to improve patient prognosis and reduce the long-term impact of the syndrome after intensive care. [30]

International Journal of Health Science ISSN 2764-0159 DOI https://doi.org/10.22533/at.ed.15952325280513

CONCLUSION

Post Intensive Care Syndrome (PICS) represents a significant challenge in medicine, affecting a substantial proportion of patients who survive prolonged stays in Intensive Care Units (ICUs). Its complexity and multifactoriality require an integrated and continuous approach that is not limited to the acute phase of treatment, but extends to post-discharge, recognizing the importance of monitoring and treating its physical, cognitive and psychological sequelae.

Early recognition of PICS is an essential step in ensuring that patients receive adequate care, with interventions aimed at minimizing the long-term impact of this condition. The risk factors identified, such as advanced age, comorbidities, prolonged ICU stay and female gender, are important indicators for predicting PICS and can help in the early identification of the most vulnerable patients.

Knowledge of these factors allows healthcare teams to implement preventive strategies from the start of hospitalization, such as early mobilization, sedation control, proper management of delirium and active family participation in the recovery process, promoting a holistic approach that positively impacts the patient's recovery.

The impact of PICS, however, goes beyond patients and also affects their families, who often need psychological support and guidance to deal with the changes and challenges that come with recovering from a critical hospitalization. Thus, clinical practice should be more than just immediate physical treatment, but include the provision of emotional and psychological support, with the aim of promoting a complete and sustainable recovery for patients and their families.

Continued research into PICS and awareness-raising among healthcare professionals, patients and their families are crucial elements in improving recognition of the syndrome and proper management of its effects. Clinical protocols such as ABCDEFGH, which encompass prevention and early rehabilitation measures, should be widely disseminated and implemented to ensure that patients receive the necessary care during and after their ICU stay.

Therefore, PICS should be recognized as a serious and treatable condition that requires a multidisciplinary approach. Its early diagnosis and effective management are crucial to improving the quality of life of ICU survivors, reducing the impact of physical and psychological sequelae and promoting a full and sustainable recovery over time.

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