

Multidisciplinary Team Performance In The Management Of Patients With Traumatic Brain Injury (Tbi) In Emergency Care: Narrative Review

Paulo Alves Bezerra Morais¹, Reginaldo Da Silva Canhete²,
Cristiane De Sá Dan³, Tiago De Campos Mendes⁴, Veridiana Giselle Da Rosa⁵,
Bianca Ramalho Dos Santos Silva⁶, Rubenilson Luna Matos⁷,
Luciane Resende Da Silva Leonel⁸,
Marhesca Carolyne De Miranda Barros Gomes⁹, Clebson Ferreira De Lima¹⁰,
Nayara Jose Anchieta Scrivener¹¹, Ítala Ferreira De Jesus¹²,
Erica Cristina Dos Santos Schnauffer¹³, Juliana Custodio Lopes¹⁴,
Hildamar Nepomuceno Da Silva¹⁵

¹(Department Of Medicine / University Hospital Of The Federal University Grande Dourados (Hu-Ufgd), Brazil)

²(Department Of Public Administration. Federal University Of Grande Dourados - Ufgd. Brazil)

³(Department Of Health Sciences. Federal University Of Grande Dourados - Ufgd. Brazil)

⁴(Department Of Nursing. State University Of Mato Grosso Do Sul- Uems. Brazil)

⁵(Department Of Nursing. Centro Universitário Da Grande Dourados-Unigran. Brazil)

⁶(Department Of Nursing. Faculty Of Medical Sciences Of Santa Casa De São Paulo-Fcmscsp. Brazil)

⁷(Department Of Health Promotion, Human Development And Society. Universidade Luterana Do Brasil - Ulbra. Brazil)

⁸(Department Of Nursing. State University Of Maranhão-Uema. Brazil)

⁹(Department Of Nursing. Centro Universitário Santo Agostinho-Unifsa. Brazil)

¹⁰(Departamento De Enfermagem. Universidade Estadual Da Paraíba-Uepb. Brazil)

¹¹(Department Of Nursing. Centro Universitário Do Maranhão -Uniceuma. Brazil)

¹²(Department Of Nursing. Centro Universitário Nobre-Unifan. Brazil)

¹³(Department Of Health Sciences. Federal University Of Grande Dourados - Ufgd. Brazil)

¹⁴(Departamento De Enfermagem Do Trabalho . Faculdade Faveni. Brazil)

¹⁵(Department, Urgency And Emergency/ Uninovafapi University Center, Brazil)

Abstract:

Traumatic Brain Injury (TBI) refers to an impact affecting the cranial region and its contents, resulting in injuries that can be congenital or non-degenerative, affecting various systems related to the Central Nervous System (CNS). Thus, the present study aims to analyze the existing literature on the importance of the multidisciplinary team in the care of patients with cranial trauma in urgent and emergency settings. A narrative literature review was conducted. The search was conducted during May 2024, in the following databases: Medical Literature Analysis and Retrieval System Online (MEDLINE) via National Library of Medicine National Institutes of Health (PUBMED); Latin American and Caribbean Literature in Health Sciences (LILACS) and Nursing Databases (BDENF) via Virtual Health Library (BVS). In the search, Health Sciences Descriptors (DECS) and Medical Subject Headings (MeSH) were used, and the descriptors were synchronized using the boolean operator AND: "Craniocerebral Trauma" AND "Patient Care Team" AND "Emergency Service, Hospital". Inclusion criteria included articles published in the last 5 years, from 2019 to 2023, full-text articles freely available in Portuguese, English, or Spanish. Exclusion criteria included editorials, theses, dissertations, and monographs, as well as those that did not address the research problem. In the literature review, 160 relevant articles were identified, distributed across different databases as follows: 70 articles from MEDLINE, 50 articles from PUBMED, and 40 articles from BDENF. After applying the established exclusion criteria, 7 studies were selected for detailed analysis. As a result, the involvement of a multidisciplinary team in the treatment of patients with Traumatic Brain Injury (TBI) in emergency care is of utmost importance to ensure a comprehensive and effective approach. Each professional plays a specific and complementary role, contributing to the assessment, stabilization, treatment, and rehabilitation of the patient. It is concluded that the

involvement of the multidisciplinary team in emergency care extends beyond acute treatment to include planning for the continuity of care and the transition to rehabilitation and long-term follow-up. This comprehensive approach promotes better clinical outcomes and quality of life for TBI patients.

Key Word: *Cranioencephal Trauma; Patient Care Team; Emergency Service, Hospital.*

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I. Introduction

O Traumatismo Cranioencefálico (TCE) refere-se a um impacto que afeta a região craniana e seu conteúdo, resultando em lesões que podem ser congênicas ou não degenerativas, afetando diversos sistemas relacionados ao Sistema Nervoso Central (SNC). Essa condição é caracterizada por qualquer agressão que cause lesão anatômica ou comprometa a funcionalidade do couro cabeludo, crânio, meninges ou encéfalo, frequentemente levando a uma diminuição ou alteração do estado de consciência. O grau de TCE é classificado com base na Escala de Coma de Glasgow (ECG), que avalia o nível de consciência do paciente após o trauma, dividindo-o em leve (ECG = 13 a 15), moderado (ECG = 9 a 12) e grave (ECG = 3 a 8) (Neto; Barros; Morais, 2021).

O Traumatismo Cranioencefálico é um desafio de saúde pública global, representando um significativo ônus financeiro para a sociedade devido à alta taxa de morbidade e mortalidade. É a principal causa de morte e invalidez entre adolescentes e adultos jovens, sendo classificado como o terceiro fator de mortalidade na população em geral, superado apenas por doenças cardiovasculares e neoplasias (Magalhães et al., 2022). No Brasil, o TCE apresenta uma das maiores incidências do mundo, com custos estimados em cerca de um bilhão de dólares, incluindo materiais e perda de produtividade. Além disso, é a principal causa de morte em crianças com mais de cinco anos e contribui com 50% dos óbitos na adolescência (Pinho et al., 2021).

A abordagem do Traumatismo Cranioencefálico na enfermagem é crucial para minimizar danos e custos associados ao cuidado do paciente internado. O TCE pode resultar em dificuldades nas atividades diárias, distúrbios emocionais, comprometimento sensorial e cognitivo, especialmente em homens jovens de baixa condição socioeconômica, com histórico de trauma anterior, consumo de álcool e envolvimento em alta velocidade (Magalhães et al., 2022).

Os impactos de longo prazo incluem redução da capacidade funcional e da qualidade de vida, destacando a importância de uma abordagem que não só salve vidas, mas também reintegre o paciente à sociedade com o máximo de funcionalidade possível (Guidão; Souza, 2020). Os custos associados ao TCE são significativos, cobrindo despesas médicas e não médicas, bem como perda de produtividade, enfatizando a necessidade de estratégias eficazes de prevenção e tratamento (Mariano et al., 2022).

No contexto do atendimento a pacientes com Traumatismo Cranioencefálico (TCE) em situações de urgência e emergência, a atuação da equipe multiprofissional é fundamental para garantir uma abordagem abrangente e eficaz. Essa equipe geralmente é composta por médicos, enfermeiros, fisioterapeutas, psicólogos e outros profissionais de saúde, cada um desempenhando um papel específico no cuidado do paciente. No momento inicial do atendimento, é crucial que a equipe trabalhe de forma coordenada para avaliar rapidamente a gravidade do TCE, estabilizar o paciente e iniciar o tratamento adequado (Mariano et al., 2022).

Durante o processo de cuidado, os profissionais se dedicam a monitorar de perto os sinais vitais do paciente, administrar tratamentos conforme necessário e garantir que o paciente esteja confortável e seguro. Além disso, há um foco especial na prevenção de complicações decorrentes do TCE e na promoção da recuperação funcional. Isso pode envolver a implementação de estratégias de reabilitação e suporte emocional tanto para o paciente quanto para seus familiares, visando maximizar o potencial de recuperação e qualidade de vida pós-trauma. Ao longo do processo de cuidado, a comunicação eficaz entre os membros da equipe é fundamental para garantir uma abordagem integrada e coordenada. Isso permite a troca de informações essenciais, tomada de decisões colaborativas e ajustes contínuos no plano de cuidados conforme necessário. Em última análise, é a colaboração e o trabalho em equipe que permitem oferecer um cuidado de qualidade e promover melhores resultados para os pacientes com TCE em situações de urgência e emergência (Magalhães et al., 2022). Desta forma, o presente estudo teve como objetivo, analisar a literatura existente sobre a importância da equipe multiprofissional no atendimento do paciente com Traumatismo craniano na urgência e emergência.

II. Material And Methods

Traumatic Brain Injury (TBI) refers to an impact that affects the cranial region and its contents, resulting in injuries that can be congenital or non-degenerative, affecting various systems related to the Central Nervous System (CNS). This condition is characterized by any aggression that causes anatomical injury or compromises the functionality of the scalp, skull, meninges, or brain, often leading to a decrease or alteration in the state of consciousness. The severity of TBI is classified based on the Glasgow Coma Scale (GCS), which

assesses the patient's level of consciousness after the trauma, dividing it into mild (GCS = 13 to 15), moderate (GCS = 9 to 12), and severe (GCS = 3 to 8) (Neto; Barros; Morais, 2021).

Traumatic Brain Injury is a global public health challenge, representing a significant financial burden on society due to its high morbidity and mortality rates. It is the leading cause of death and disability among adolescents and young adults, ranked as the third cause of mortality in the general population, surpassed only by cardiovascular diseases and neoplasms (Magalhães et al., 2022). In Brazil, TBI has one of the highest incidences in the world, with estimated costs of about one billion dollars, including materials and loss of productivity. Additionally, it is the leading cause of death in children over five years old and accounts for 50% of deaths in adolescence (Pinho et al., 2021).

The approach to Traumatic Brain Injury in nursing is crucial to minimize damage and costs associated with the care of hospitalized patients. TBI can result in difficulties in daily activities, emotional disturbances, and sensory and cognitive impairment, especially in young men of low socioeconomic status, with a history of previous trauma, alcohol consumption, and involvement in high-speed activities (Magalhães et al., 2022).

The long-term impacts include a reduction in functional capacity and quality of life, highlighting the importance of an approach that not only saves lives but also reintegrates the patient into society with the maximum possible functionality (Guidão; Souza, 2020). The costs associated with TBI are significant, covering medical and non-medical expenses, as well as loss of productivity, emphasizing the need for effective prevention and treatment strategies (Mariano et al., 2022).

In the context of providing care to patients with Traumatic Brain Injury (TBI) in urgent and emergency situations, the role of the multidisciplinary team is essential to ensure a comprehensive and effective approach. This team typically consists of doctors, nurses, physiotherapists, psychologists, and other health professionals, each playing a specific role in patient care. At the initial moment of care, it is crucial that the team works in a coordinated manner to quickly assess the severity of the TBI, stabilize the patient, and initiate appropriate treatment (Mariano et al., 2022).

During the care process, professionals are dedicated to closely monitoring the patient's vital signs, administering treatments as necessary, and ensuring the patient is comfortable and safe. Additionally, there is a special focus on preventing complications resulting from TBI and promoting functional recovery. This may involve implementing rehabilitation strategies and emotional support for both the patient and their families, aiming to maximize the potential for recovery and quality of life post-trauma. Throughout the care process, effective communication among team members is fundamental to ensure an integrated and coordinated approach. This allows for the exchange of essential information, collaborative decision-making, and continuous adjustments to the care plan as needed. Ultimately, it is the collaboration and teamwork that enable the delivery of quality care and promote better outcomes for patients with TBI in urgent and emergency situations (Magalhães et al., 2022).

Thus, the present study aimed to analyze the existing literature on the importance of the multidisciplinary team in the care of patients with Traumatic Brain Injury in urgent and emergency settings.

III. Result And Discussion

The treatment of patients with Traumatic Brain Injury (TBI) requires a multidisciplinary approach involving various healthcare professionals to ensure comprehensive and effective care. This multidisciplinary team plays a fundamental role in emergency care, where speed and coordination of actions are crucial for the patient's survival and recovery (Nascimento et al., 2020).

In emergency care, the multidisciplinary team is composed of doctors, nurses, physiotherapists, occupational therapists, speech therapists, psychologists, and social workers, each with their respective specialties and contributions to the treatment of TBI patients (Xenofonte; Marques, 2021).

The doctor, usually a neurosurgeon or an emergency physician, is responsible for the initial assessment of the patient, stabilization of vital functions, imaging tests, and decision-making regarding surgical treatment if necessary. Their role is crucial for preserving life and preventing complications. Nurses play a vital role in constantly monitoring the patient, administering medications, performing dressings, and coordinating the nursing team. They are responsible for ensuring the patient's hemodynamic stability and preventing complications such as infections and pressure ulcers (Carmo et al., 2020; Nascimento et al., 2020).

Physiotherapists are involved in the early rehabilitation of the patient, performing mobilization exercises, muscle strengthening, and postural reeducation. They also help prevent complications such as contractures and pneumonia and improve respiratory function. Occupational therapists work on reintegrating the patient into daily life activities, such as eating, personal hygiene, and dressing. They also assist in adapting the hospital environment and preparing the patient for discharge (Lefevre et al., 2021).

Speech therapists assess and treat swallowing, speech, and language disorders, which are common in TBI patients. They work on communication rehabilitation and prevent complications like food aspiration. Psychologists play a fundamental role in the emotional support of the patient and their family, helping them

cope with the consequences of TBI, such as personality changes, depression, and anxiety (Bao et al., 2020; Lefevre et al., 2021).

Social workers provide guidance and support to the family, helping them understand the patient's clinical condition, organize hospital discharge, and coordinate with the healthcare and social services network. The coordinated and integrated work of this multidisciplinary team is essential for a comprehensive patient evaluation, therapeutic plan definition, and implementation of effective interventions, aiming at clinical improvement and reintegration of the patient into society (Kochoyan et al., 2019; Magalhães et al., 2022).

During emergency care, the multidisciplinary team must maintain constant communication, sharing relevant information about the patient's condition and the interventions performed. This effective communication is fundamental for rapid and assertive decision-making, ensuring continuity of care. The role of the multidisciplinary team in treating TBI patients in emergency care is crucial for improving clinical outcomes, reducing complications, and promoting rehabilitation and social reintegration of these individuals. This integrated and collaborative approach is essential to provide excellent care and ensure the best possible quality of life for patients (Bao et al., 2020; Lefevre et al., 2021).

IV. Conclusion

The involvement of a multidisciplinary team in the treatment of patients with Traumatic Brain Injury (TBI) in emergency care is extremely important to ensure a comprehensive and effective approach. Each professional plays a specific and complementary role, contributing to the assessment, stabilization, treatment, and rehabilitation of the patient. Coordination and communication among team members are essential for providing integrated and quality care, allowing for quick and accurate decision-making. The collaborative efforts of doctors, nurses, physiotherapists, occupational therapists, speech therapists, psychologists, and social workers result in holistic and personalized care. Early rehabilitation and the prevention of complications are key focuses of the multidisciplinary team, aiming not only at the patient's survival but also at their functional recovery and reintegration into society. Emotional support for the patient and their family is equally important, helping them cope with the physical and psychological consequences of TBI. The role of the multidisciplinary team in emergency care extends beyond acute treatment to include planning for the continuity of care and the transition to rehabilitation and long-term follow-up. This comprehensive approach promotes better clinical outcomes and quality of life for patients with TBI.

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