- Пробиотики (Диалакт).
- Гепатопротекторы (Силимарин).
- Энтеральное зондовое питание.
- Общий и респираторный уход.

Выводы

Таким образом, в результате лечения состояние пациентки улучшилось. Через несколько дней интенсивной терапии проведена экстубация, отключение гемодинамической поддержки. Пациентка переведена в общее психиатрическое отделение для дальнейшего лечения.

СПИСОК ИСПОЛЬЗОВАННОЙ ЛИТЕРАТУРЫ

1. *Абрамов, Д. Е.* Острые алкогольные психозы у лиц пожилого возраста : автореф. дис. ... канд. мед. наук / Д. Е. Абрамов. – Томск, 2007. – 24 с.

2. A nationwide study of breast cancer, depres-sion, and multimorbidity among hospitalized women and men in the United States / R. J. [Zoorob et al.] // Breast Cancer Res Treat. – 2019. – Vol. 174(1). – P. 237–248.

3. Clinical Review of Oral and Maxillofacial Surgery (Second Edition), 2021.

4. *Антипова, Л. А.* Некоторые клинические особенности алкоголизма, протекающего с психотическими расстройствами и без них / Л. А. Антипова // Вопросы наркологии. – 2007. – № 3. – С. 15–21.

5. Интоксикационные психозы книга.

6. Истории болезней пациента.

7. МКБ 10 Психические и поведенческие расстройва вызванные употреблением алкоголя.

8. Alcoholic delirium: causes, diagnosis, treatment, consequences, 2019.

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INVESTIGATION OF ALBUMIN LOSS IN A PEDIATRIC ICU PATIENT WITH BURN DISEASE: A CASE REPORT

Introduction

Albumin is a protein produced by the liver and found in the blood. The normal range of albumin levels in children varies by age: newborns (3.5–5.5 g/dL), children aged 1–3 years (3.9–5.3 g/dL), children aged 3–6 years (4.0–5.4 g/dL), children aged 6–12 years (4.1–5.5 g/dL), and adolescents aged 12–18 years (4.2–5.6 g/dL) [1]. Albumin plays a crucial role in maintaining osmotic pressure, transporting substances (such as hormones, fatty acids, bilirubin, and drugs in the bloodstream), acting as an antioxidant, regulating pH balance, supporting wound healing and binding and neutralizing toxins [2]. Albumin is primarily lost naturally from the body through the kidneys via urine. Small amounts of albumin are filtered by the kidneys from the bloodstream as part of the normal filtration process. However, under normal circumstances, the kidneys reabsorb almost all of the filtered albumin, preventing significant amounts of albumin from being excreted in the urine [3]. In burn patients, albumin plays a critical role in the recovery process by addressing various aspects of their condition. Administered intravenously, albumin helps restore blood volume and maintain fluid balance, which is crucial in managing the fluid loss and hypovolemia often seen in burn injuries. Additionally, albumin supports wound healing by restoring oncotic pressure, preventing fluid leakage into tissues. Its role as a carrier protein also aids in delivering essential nutrients to promote tissue repair and meet increased metabolic demands in burn patients. Furthermore, albumin's anti-inflammatory and antioxidant properties

help reduce inflammation and oxidative stress, contributing to a more effective healing process [1, 3]. The percentage of albumin loss in burn patients can vary depending on the severity of the burn injury and individual patient factors. In general, burn injuries can lead to significant protein loss, including albumin, due to factors such as increased capillary permeability, fluid shifts, and tissue damage. Studies have reported that burn patients can experience albumin losses ranging from 15% to 50% or more, depending on the extent of the burn injury and associated complications. Post-operative patients who have undergone surgery for burn injuries may also experience additional albumin loss due to the stress of surgery and the body's increased metabolic demands during the recovery process [4]. This study aims to investigate albumin loss in a pediatric ICU patient with burn disease through a case report.

Goal

To investigate albumin loss in a pediatric ICU patient with burn disease in I, II, IIIa and IIIb stages.

Research material and methods

A single patient was selected from the burn department ICU of Gomel City Clinical Hospital within the period from February 26 to March 11, 2024. The patient's medical record was retrospectively analyzed to identify the diagnosis, procedures performed, and transfusion products administered based on specific dates. The analysis focused on the patient's biochemistry data, particularly the albumin levels in the blood, while excluding other instrumental and laboratory investigation data. The collected information was then systematically examined and compared to assess the extent of albumin loss in this pediatric ICU patient.

The results of the research and their discussion

The Patient K, a young male child born on June 2, 2020. He was admitted to the burn department of Gomel City Clinical Hospital No. 1 on February 7, 2024. The patient had suffered thermal burns from boiled water, resulting in burns on the trunk, gluteal region, and both lower extremities, with a total body surface area (TBSA) of 23% (15%) involving stages I, II, IIIa, and IIIb. Upon admission, the patient presented with burn disease in the stage of burn shock and concomitant acute respiratory infections, including acute rhinopharyngotonsillitis and laryngotracheitis, with laryngeal stenosis of stage 0–1. During the hospitalization period, the patient underwent various operations, including anesthesia for wound revision, primary bandaging, central vein catheterization, and 3 operations of wound debridement and autograft surgeries with endotracheal anesthesia on February 19, 22, and March 4, 2024. The patient received the following blood components during the treatment: albumin 20% on February 7, 8, 10, 13, 24, and 28, 2024; leukocyte-reduced red blood cells on February 8, 14, 19, and 20, 2024; and double-washed red blood cells on February 25 and March 4, 2024. The patient's blood group is A(II) Rh(+).

Even after several attempts of autograft surgeries it was visible that the transplanted skin from the autograft did not take root well. Poor vascular supply, inflammation and scarring, infection, delayed healing or mechanical stress can be the factors that can affect success of autografts in burn patients.

With the information gathered about the laboratory level of serum albumin (measured in g/L) of the patient K and the amount of 20% albumin infusion administered over time since admission to the hospital is plotted into a graph and is depicted in Figure 1.

During the initial 2 days after admission we cannot see a notable increase in serum albumin levels following albumin infusion. This can be because burn injuries can lead to increased capillary permeability, causing albumin to leak into the interstitial space, contributing to decreased serum levels despite supplementation. The fluid shifts induced by burn trauma can also lead to the redistribution of albumin and other proteins, affecting serum concentrations [2].

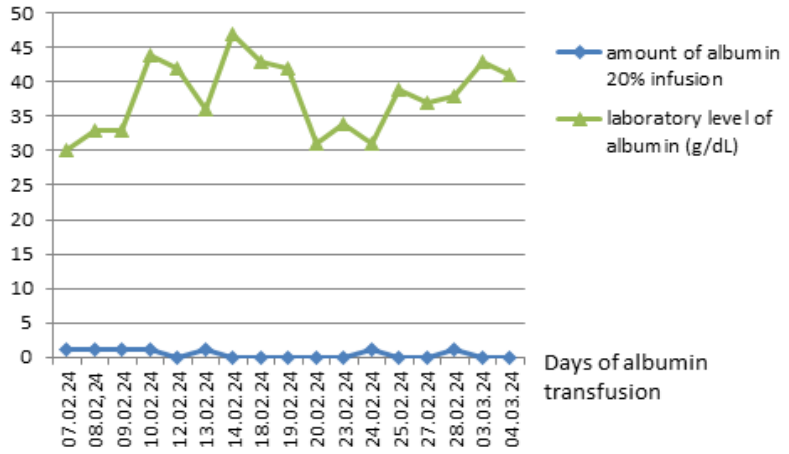

Figure 1 – Graph representing how the laboratory level of albumin changes according to the days of albumin infusions given

A reduction in serum albumin levels is observed on the days corresponding to debridement and autograft surgeries, specifically on the 12th, 15th, and 26th days from admission, despite the administration of albumin 20%. Surgical procedures like debridement and autograft surgeries often result in increased protein losses due to tissue manipulation, bleeding, and drainage, leading to a temporary decrease in serum albumin levels. Additionally, the inflammatory response triggered by surgical trauma can further exacerbate vascular permeability and protein leakage into the interstitial space, impacting serum albumin concentrations [4].

On days distinct from the initial admission days and the days of debridement and autograft surgeries, a significant elevation in serum albumin levels is observed subsequent to the administration of albumin 20%. The rise in serum albumin levels after the administration of albumin 20% can be attributed to the exogenous supplementation of albumin, which directly increases the concentration of this protein in the bloodstream. Albumin 20% is a concentrated solution of albumin that is infused intravenously to help restore and maintain adequate oncotic pressure in the blood vessels. By introducing additional albumin into the circulation, the body's total albumin pool is temporarily augmented, leading to an increase in serum albumin levels [1].

Conclusions

Albumin is a vital protein essential for various physiological functions in the body, including maintaining osmotic pressure, transporting substances, regulating pH balance, supporting wound healing, and acting as an antioxidant. In burn patients, albumin plays a crucial role in managing fluid loss, supporting wound healing, and addressing the inflammatory response and oxidative stress associated with burn injuries. The percentage of albumin loss in burn patients can vary based on the severity of the injury and individual factors, with significant losses reported in some cases. The administration of albumin 20% in burn patients helps restore blood volume, maintain fluid balance, and support wound healing by increasing oncotic pressure. While initial days after admission and postoperative periods following debridement and autograft surgeries may show fluctuations in serum albumin levels despite albumin infusion due to factors like capillary permeability and surgical stress, there is a notable increase in serum albumin levels on other days following albumin 20% administration. This elevation is attributed to the direct supplementation of albumin, enhancing vascular integrity and fluid balance in burn patients. Overall, understanding the dynamics of albumin levels in burn patients is crucial for optimizing patient care and outcomes in the management of burn injuries. A profound deficiency of albumin can have significant implications for the patient's recovery period by affecting several

important physiological processes including fluid balance, nutrient transport, immune function, wound healing and muscle function which are essential for a smoother recovery process.

LITERATURE

1. Zdolsek, M., Hahn, R. G., Sjöberg, F., & Zdolsek, J. H. (2020). Plasma volume expansion and capillary leakage of 20% albumin in burned patients and volunteers. Critical care (London, England), 24(1), 191. https://doi.org/10.1186/s13054-020-02855-0

2. Pérez-Guisado J, de Haro-Padilla JM, Rioja LF, Derosier LC, de la Torre JI. Serum albumin levels in burn people are associated to the total body surface burned and the length of hospital stay but not to the initiation of the oral/enteral nutrition. Int J Burns Trauma. 2013;3(3):159-163. Published 2013 Jul 8.

3. Soedjana H, Bowo SA, Putri NM, Davita TR. Serum albumin level difference in burn injury after tangential excision: A prospective cohort study. Ann Med Surg (Lond). 2020;52:1-4. Published 2020 Feb 26. doi:10.1016/j.amsu.2020.02.007

4. Greenhalgh, David G. MD; Housinger, Terry A. MD; Kagan, Richard J. MD; Rieman, Mary RN; James, Laura MS; Novak, Sheri RN; Farmer, Lynn RN; Warden, Glenn D. MD. Maintenance of Serum Albumin Levels in Pediatric Burn Patients: A Prospective, Randomized Trial. The Journal of Trauma: Injury, Infection, and Critical Care 39(1):p 67-74, July 1995.

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SURVEY OF PREVALENCE AND BURDEN OF OSTEOARTHRITIS IN INDIA

Introduction

Osteoarthritis (OA) is a prevalent chronic degenerative joint disorder that eloquently impacts the quality of life of individuals worldwide [1]. It is the most common rheumatic disease and the predominant cause of disability covering an extensive range (worldwide) and comes in 4th most common cause of disability worldwide. In India, the burden OA is imperishable, affecting a notable portion of the population [2]. It is characterized by the progressive degeneration of articular (joint) cartilage and underlying bone. The burden of Osteoarthritis is expected to increase with the senile or aging population and have a great prevalence of risk factors such as obesity and passive lifestyle [3]. According to the other studies and the analytical results of this research paper we can say that OA also affects women more than men and its prevalence increases with age.

In the Indian ambience, the impact of OA is conspicuously significant due to the big population size and demographic transition [4].

Goals

To know about the factors contributing to the burden of osteoarthritis in India.

– Socioeconomic Implications of Osteoarthritis in India;

– Epidemiology of Osteoarthritis in India;

– To know the prevalence of Osteoarthritis on age and gender.

Material and methods of research

As a increasing prevalence of Osteoarthritis in India. A cross-sectional survey was conducted among the cases of patients in two different Orthopaedic hospitals of India. So, instead of collecting data using google form platform as a survey I used community based survey.

Total 33 patient's cases were taken from the hospitals of India. Around 18 cases were taken from Hospital 1 and 15 cases from Hospital 2, to get a more precise and an accurate data for this research. A detailed study is done from it to do a proper analysis for this research paper.