

EXPERIENCE IN THE USE OF HUMAN ALBUMIN IN COMPLICATIONS OF LIVER CIRRHOSIS AT HOSPITAL JUÁREZ DE MÉXICO

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Introduction and Objectives: Controlled clinical studies have demonstrated the benefits of albumin in decompensated cirrhotic patients with ascites, elevated creatinine, spontaneous bacterial peritonitis, refractory ascites, hepatorenal syndrome and encephalopathy, in whom the use of albumin improves not only patient survival but also expands intravascular volume, improves microcirculation, binding to numerous substances such as bile acids, nitric oxide and cytokines. However, the time of administration and the dose remains controversial.

Objective: To present the experience of the administration of human albumin, the clinical and epidemiological factors associated with the success of the treatment in the different complications of hospitalized patients for decompensated cirrhosis in the Gastroenterology Department at Hospital Juárez de México from January 2019 to January 2021.

Material and methods: A descriptive, retrospective, observational and cross-sectional study of a cohort of patients hospitalized for decompensated liver cirrhosis in the Gastroenterology Department at Hospital Juárez de México. The records of 63 patients who were administered albumin at a dose of 0.7 gr/kg of body weight were reviewed according to the type of complication, reason for admission, in such a way that epidemiological data, values from laboratory studies, cause of prescription and administration results which were analyzed with measures of central tendency and percentages, obtaining Child Pugh and MELD scores.

Results: Of the population studied (N=63); 42.8% were men (n=27) with an average age of 57.7 years, 57.1% were women (n=36) with an average age of 59.42 years. Regarding the etiology of liver disease, the following order was observed: alcohol-related liver disease in 42.8%, MAFLD (metabolic associated fatty liver disease) 42.8%, AIH (autoimmune hepatitis) 4.75%, PBC (primary biliary cirrhosis) 4.75% and HBV (hepatitis B virus) 4.75%. Indications for the use of albumin were spontaneous bacterial peritonitis 53.3%; an acute renal failure that does not respond to fluids, precipitated by: upper gastrointestinal bleeding in 14.2%, urinary tract infection 9.5%, alcoholic hepatitis 9.5%, liver failure due to hepatitis B virus 4%, hepatorenal syndrome 9.5%. 42.8% of the patients in the study cohort had at least one comorbidity. 77.7% of them had type 2 diabetes, 11.1% had type 2 diabetes and arterial hypertension, UC was observed in 11.1% of the population. 4.76% had Child-Pugh score A, 28.57% had Child-Pugh score B and Child Pugh score C 66.66% with an average MELD Na of 25 points. In 94.7% of the cases, effectiveness was observed in the resolution of the complication, 5.3% of the patients, despite the administration of albumin, died of septic shock (secondary to urinary tract infection n=3, SBP n=4 and pneumonia n=1), these patients had Child Pugh C, mean MELD Na 32, and mean serum albumin of 1.8 mg / dl, in contrast to the respondents who had mean serum albumin of 2.62 mg / dl.

Discussion: Unlike what is reported in the literature, we observed that despite the lower doses administered than those recommended in the treatment guidelines, we obtained a 94.7% success rate in treated patients, observing that factors such as serum albumin value, comorbidities, Child Pugh score, MELD-NA and added infectious processes can be determining factors in the results of treatment, which raises the question of: whether the administration of albumin should be individualized according to the clinical characteristics of the patient and not a standardized dose according to their complication.

Conclusions: Serum albumin values, the presence of comorbidities, acute infections, and high Child Pugh and MELD Na scores are independent factors that affect the results of human albumin treatment in decompensated cirrhotic patients.

The authors declare that there is no conflict of interest

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CHANGES IN CARDIAC FUNCTION IN PATIENTS WITH DECOMPENSATED CHRONIC LIVER FAILURE

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Introduction and Objectives: Cirrhotic cardiomyopathy is cardiac dysfunction, recently recognized as a clinical entity, present in up to 50% of liver cirrhosis in the absence of other heart diseases. Cirrhotic cardiomyopathy is characterized by a decrease in the contractile response of the heart in patients with CH, associated with the presence of an alteration in diastolic relaxation and electrophysiological alterations at rest, all in the absence of known heart disease and regardless of the etiology of liver disease. Hemodynamic and electrophysiological studies have made it possible to document alterations in cardiac behavior in 25 and 40-60% of patients with liver cirrhosis, respectively. **Objective:** Determine the alterations in cardiac function in patients diagnosed with decompensated chronic liver failure.

Material and methods: Descriptive, observational, cross-sectional and prospective study, carried out all the patients with decompensated liver cirrhosis who attended the Central Military Hospital from January 2021 to September 2021 and who underwent a laboratory study, echocardiogram, electrocardiogram, chest X-ray and laboratory studies. The mean, standard deviation and absolute and relative frequencies will be used for the quantitative variables for the statistical calculation. The statistical package SPSS version 20 will be used.

Results: Eleven older patients with a diagnosis of decompensated chronic liver failure were included. A new study carried out on the same basis as CANONIC, allowed to clarify the dynamic and evolutionary character of patients with ACLF, determining the average mortality at 28 and 90 days, according to the number of compromised organs. Thus, the presence of ACLF-1 determines a risk of death at 28 and 90 days of 18 and 39%, respectively, a figure that increases in ACLF-2. 54.5% were men, the average age 54.2 years \pm 10.3, 27.3% had arterial hypertension and 9.1% DM2, the etiologies were by enol in 54.5%, HAI 18.2%, PBC 18.2% and 9.1% by MAFLD. Mean arterial pressure was 77.0 ± 8.1 , QTc 449.9 ± 57.6 , and HR 78.54. The Child-Pugh scale had mainly C score values in 36.4% of the cases, followed by 27.3% in 12-point scores, scores of 10, 11 and B had only one case, respectively (9.1%). The MELD score was 10 at 40 points, 27.3% of the patients reported 18 points, a case similar to the MELD-NA from 13 to 40, with 18.2% of the patients at 21 points and a similar percentage at 29 points. CLIF score was distributed in 54.5% in 1, 27.3% in 2 and 18.2% in 0. PSAP had a mean of 31.2 ± 8.3 and diastolic dysfunction, it appeared in two cases as isovolumic relaxation and in two as a slow relaxation pattern, the other patients had various types of diastolic dysfunction, the natriuretic peptide was 314.1 pg / ml with a range of 13.1 to 1270.0 pg / ml . Troponin in 45.5% of the cases was less than 0.1 ng / L , in 27.3% $<0.05 \text{ ng / L}$, in 18.2% $<0.01 \text{ ng / L}$ and 9.1% was 0.026 ng / L . CK-MB in 90.9% was less than 1.0 U / L and in 9.1% it was 1.8 U / L . TAPSE had an average of $23.2 \text{ MM} \pm 4.3$.

Discussion: 30% of these patients died in this hospitalization With an average of 30 ± 10 days hospitalized. The decompensating cause was 72% ascites, 20.5% hepatorenal syndrome and 7.5 other causes,

including gastrointestinal bleeding. Observing that with this number of patients, there is a great implication in mortality and in the number of days of hospital stay.

Conclusions: It was possible to characterize cardiac function alterations in patients with a diagnosis of decompensated chronic liver failure, being more affected patients with arterial hypertension, etiology attributable to alcoholism, Child-Pugh C, MELD of > 27 points and MELD-NA of > 18 points and mainly CLIF 1 and PSAP of 31. It is expected to increase the number of patients to obtain greater clinical relevance.

The authors declare that there is no conflict of interest.

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EFFICACY AND SAFETY OF TERLIPRESSIN INFUSION VS BOLUS TREATMENT IN DIGESTIVE BLEEDING OF VARICEAL ORIGIN AT THE PUEBLA SPECIALTY HOSPITAL, PRELIMINARY RESULTS

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Introduction and Objectives: Digestive bleeding of variceal origin represents an emergency medical event, with a mortality rate close to 20% and drug treatment is one of the pillars of management. In our environment and according to international recommendations, terlipressin administered in boluses is the treatment of choice for this entity, with a high percentage of adverse effects related to its use, so it is relevant to find other strategies in its use, but without reducing its use effectiveness. Some studies suggest that the use of terlipressin by continuous infusion could represent a more effective or comparable strategy for the control of bleeding, a lower rate of adverse effects and a lower risk of rebleeding, so the objective of this study is to compare the efficacy and safety of terlipressin in intermittent dose vs. infusion for acute bleeding of variceal origin in patients with portal hypertension.

Material and methods: this is a randomized, open, comparative and prospective study that included adult patients with a diagnosis of portal hypertension of any origin, with manifest gastrointestinal bleeding, treated at the Puebla Specialty Hospital since March 1, 2021, who were randomly administered terlipressin by infusion and boluses. Study variables: treatment failure, adverse effects, days of hospital stay and transfusion requirement. The protocol was approved by the local committee and conbioethics 21-CEI-002-20180731, all patients participated with informed consent. Results were analyzed with frequency measures, Fisher's exact test was used to demonstrate hypotheses, and Student's t-test was used for unrelated normal distribution variables.

Results: Up to now, 10 patients have been admitted to the study, in which no significant differences have been obtained in the study variables; however, in the bolus terlipressin group, three of the five patients have presented adverse effects, unlike the infusion terlipressin group in which they have not been presented.

Discussion: At the moment, a total of 10 patients has demonstrated comparable effectiveness in both groups; however, in the bolus group, 60% of the patients have presented adverse effects that have led to the change of vasoactive drug, unlike the infusion group where there have been no adverse effects, however, no significant differences have been found between both groups, which is explained by the small number of patients at the moment.

Conclusions: We consider that a larger number of patients is required to demonstrate our hypothesis.

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DIABETES AS A CAUSE OF DECOMPENSATION IN HEPATIC CIRRHOSIS

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Introduction and objectives: Cirrhosis and diabetes mellitus are two chronic diseases with a significant impact on quality of life glucose intolerance has been observed in about 80% of patients with cirrhosis, 30-60% of patients with advanced cirrhosis develop diabetes. The development of diabetes as a complication of cirrhosis is referred to as hepatogenic diabetes and type 2 diabetes which the patient develops prior to the presence of cirrhosis. Hepatogenic diabetes, unlike diabetes mellitus, lacks a family history, less obesity, and a lower incidence of micro and macrovascular complications. Diabetes increases morbidity and mortality in patients with liver cirrhosis. The effect of type 2 diabetes and hepatogenic diabetes on the clinical outcome of cirrhosis has been evaluated in a few studies. Diabetes mellitus has been shown to be associated with an increased risk of complications and mortality. We consider it important to assess the association between the type of diabetes (hepatogenic and non-hepatogenic) with the presence of decompensation of cirrhosis (hemorrhage, hepatic encephalopathy, ascites, spontaneous bacterial peritonitis).

Material and methods: Ambispective, observational, descriptive study. Patients with a diagnosis of liver cirrhosis and diabetes from an outpatient clinic at the General Hospital of Ticomán and a review of the clinical record are included, collecting information on decompensation events (hemorrhage, hepatic encephalopathy, spontaneous bacterial peritonitis, ascites). Descriptive analysis is performed of the variables.

Results: Twenty-eight patients were included, of whom 15 suffer from type 2 diabetes mellitus and 13 of them were diagnosed with hepatogenic diabetes. Hepatogenic diabetes was diagnosed in 9 patients with impaired fasting glucose levels and in 4 patients with a glucose tolerance curve. In both groups, the male gender predominated (53.3 and 61% respectively), the main etiology of alcohol cirrhosis. In the group with hepatogenic diabetes, 76.92% presented some decompensation event, the most frequent being upper gastrointestinal bleeding in 80%. In this group of patients, they correspond to Child A 53.84%, Child B 38.46 and Child C 7.69%. 76.92% of the patients had a portal diameter greater than 10mm, 61.53% of the patients had large esophageal varices. In 53.84% of the patients, they were difficult to control, receiving treatment with a combination of insulin and metformin. On the other hand, in the group of patients with diabetes mellitus 69.23% presented decompensation, the most common hemorrhage in 46.66%, of these patients 33.3% Child A, 53.33% Child B and 13.33% Child C. 53.33% had a diameter of the portal greater than 10mm and 61.53 large esophageal varices. 33.33% of the patients were difficult to manage, being treated with combinations of insulin, metformin and linagliptin.

Discussion: The association of diabetes with decompensation events has been observed in some studies, Del Vecchio et al. found that diabetes was more frequent in subjects with decompensation than in those with compensated cirrhosis, with a prevalence of 63%. Targest et al. Diabetes is commonly associated with a significant increase in the development of spontaneous bacterial peritonitis. Goh et al. Diabetes is associated with an increased risk of mortality in patients with cirrhosis.

Conclusions: In our study, we observed that decompensation events were more common in the group of patients with hepatogenic