Efficacy and safety of treatment with terlipressin infusion vs. bolus in gastrointestinal bleeding of variceal origin in a third-level hospital

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Introduction and Objectives: Digestive bleeding of variceal origin represents an event with high mortality and pharmacological treatment is the mainstay in its management. In our setting, bolus terlipressin is the available treatment, although with frequent adverse effects, so we compared the efficacy and safety of bolus terlipressin vs. infusion for variceal bleeding.

Materials and methods: Experimental, randomized and comparative study in which adult patients from the Hospital de Especialidades Puebla were included from March 1, 2021, to October 31, 2021, with portal hypertension who presented with upper gastrointestinal bleeding of variceal origin and were administered terlipressin in infusion and in boluses. The protocol was approved by the local ethics committee and all patients participated with informed consent. Statistical analysis was performed in the IBM SPSS v. 28.

Results: 14 patients were randomly admitted, 7 to the infusion group and 7 to the bolus group. There were significant differences in the variables (Table 1) of days of hospital stay (p=0.023), adverse effects (p=0.018) and drug requirement (p=0.001); in the rest of the variables, there were no significant differences. Table 1.

Conclusions: Given the size of our sample and study design, larger studies with better statistical power are needed to corroborate our results.

Funding: The resources used in this study were from the hospital without any additional financing

Declaration of interest: The authors declare no potential conflicts of interest.

Table 1. Comparative table of results of the study variables between the control group (bolus) and the experimental group (infusion)

Study variables	Bolus (n=7)	Infusion (n=7)	P Value (CI 95%)	Correlation	RR
Treatment failure	0 (0.0%)	0 (0.0%)	NA	NA	NA
Adverse effects	4 (57%)	0 (0.0%)	0.018	5.60	3.33 (1.2-8.5)
Requirement of red cell concentrates	1 (0-2)	0.86 (0-3)	0.196	0.311	NA
Days of hospital stay	3.643 (3-5)	3.171 (3-3.5)	0.023	1.590	NA
Rebleeding at 6 weeks	0 (0.0%)	0 (0.0%)	NA	NA	0
Drug requirement	22.29	12.14	0.001	0.0	NA

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Evaluation of the early response to empirical treatment and its association with cultures in patients with spontaneous bacterial peritonitis (SBP)

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Introduction and Objectives: Spontaneous bacterial peritonitis (SBP) is a frequent complication in cirrhotic patients; the start of treatment is empirical and is adjusted with cultures. The antibiotic of choice is cephalosporins, which have reported high resistance. Improving SBP conditions has an impact on the evolution of patients. This study aimed to assess the early treatment response of SBP treated with empiric antibiotics.

Patients and Methods: Patients with a diagnosis of cirrhosis and SBP were included who underwent diagnostic paracentesis and paracentesis thee days after starting treatment; a decrease in ascites cellularity was evaluated as a criterion of response to treatment and the culture report. Descriptive and inferential statistics were performed. The trial was approved by the research ethics committee, and informed consent was obtained.

Results: Six hundred twenty-one patients diagnosed with liver cirrhosis were included. Forty-seven met the criteria for SBP. Thirty men (63%) and 17 women (36%); the causes of cirrhosis were: Alcohol 25 (53%), MAFLD 9 (19%), autoimmune 2 (4%) and unknown 10 (21%) By Child-Pugh B 12 (25%) and 35 (74%) C. 89% (42) received cephalosporins, of which 78% (33) responded to treatment (figure 1), of which 66% (23) did not isolated agent in culture, only 31% (10) developed bacterial agent, mainly E. coli (60%).

Conclusions: SBP is the most common cause of infections in cirrhotic patients, with a high impact on morbidity and mortality. Despite reports of resistance to cephalosporins in our population, the response to empirical treatment with cephalosporins is still optimal.

Funding: The resources used in this study were from the hospital without any additional financing

Declaration of interest: The authors declare no potential conflicts of interest.

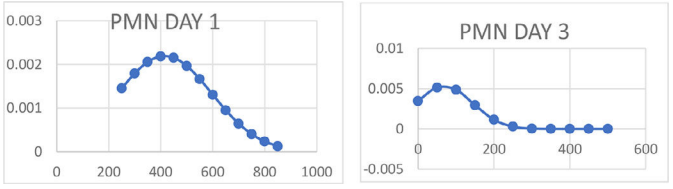

Figure 1: Comparative table of neutrophils on day zero and day three of treatment.

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MELD Na and MELD 3.0 have the best performance in predicting the risk of death at 28 days in patients with severe alcoholic hepatitis in the Mexican population

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Introduction and Objective: To compare various prognostic scales to verify which one has the best performance in predicting 28-day mortality in patients with severe toxic-alcoholic hepatitis (AH).

Materials and Methods: Observational, cohort study. Data were collected from patients with severe AH who were hospitalized between January 2010 and May 2022. MELD, MELDNa, MELD3.0, ABIC, Maddrey, and Glasgow scale for AH were calculated at admission and their outcome at 28 days was verified. ROC curves were constructed to compare the different prognostic scales.

Results: A total of 144 patients were included, 129 (89.6%) men, with a mean age of 43.3±9.3 years, and median grams of alcohol consumed/day was 320 (range: 60-1526). 65 (45.1%) died. The mean of MELD, MELDNa and MELD3.0 was higher among the deceased vs. survivors (33.5±7.5 vs. 27.1±6.2; 34.6±5.7 vs. 29.1±5.7; and 35.8± 6.0 vs. 30.1±5.5 respectively; p<0.0001). The ROC curve analysis comparing the prognostic scales is shown in Figure 1.

Conclusions: AH mortality is high. MELDNa and MELD3.0 have the best performance in predicting on admission which patients with AH are at risk of dying in the following 28 days and can be useful tools for prioritizing patients who are candidates for liver transplantation.

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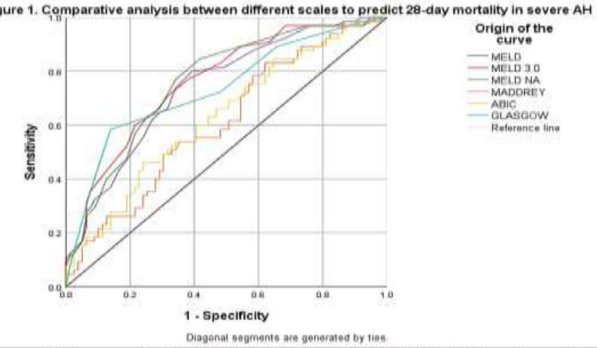
Declaration of interest: The authors declare no potential conflicts of interest.

Figure 1. Comparative analysis between different scales to predict 28-day mortality in severe AH



Diagonal segments are generated by ties

Scale	Area under the curve	95% confidence interval	P
MELD	0.743	0.663 - 0.823	< 0.0001
MELD 3.0	0.760	0.682 - 0.838	< 0.0001
MELDNa	0.761	0.682 - 0.839	< 0.0001
Maddrey	0.611	0.519 - 0.702	0.023
ABIC	0.630	0.539 - 0.721	0.007
Glasgow	0.735	0.652 - 0.818	< 0.0001

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Characterization of acute kidney injury among Mexican patients with cirrhosis

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Introduction and Objectives: Acute kidney injury is common in patients with cirrhosis and consists of various phenotypes; the first stage was divided into 2 phases; stage 1B has similar mortality to the higher stages; creatinine is not the best marker, limited by sarcopenia in cirrhosis. This study aimed to determine the characteristics of acute kidney injury in Mexican patients with cirrhosis and to evaluate its progression.

Materials and Methods: Retrospective, descriptive study, including cirrhotic patients of any etiology who developed acute kidney injury. The characteristics and progression of the disease were evaluated according to treatment and possible markers, describing the quantitative variables as mean and standard deviation for the qualitative variables in frequencies and percentages.

Results: Ninety patients were included, 62.2% men, mean age 52 ±11, 55.5% of alcoholic etiology followed by unknown and NASH (26 and 13% respectively), 4.4% in stage A, 3.5% in stage B and 58.8% in stage C for Child-Pugh; 31.1% with ACLF. The characteristics of renal failure are shown in Table 1 and the progression in Table 2.

Conclusions: Renal failure in Mexican cirrhotic patients is low (30%), as is mortality (4%).

Funding: The resources used in this study were from the hospital without any additional financing

Declaration of interest: The authors declare no potential conflicts of interest.

Table 1. Characteristics of patients with Acute Kidney Injury by Stage according to the International Ascites Club.

Characteristic	Acute Kidney Injury				
	AKI ICA Ia (N=23)	AKI ICA Ib (N=22)	AKI ICA II (N=32)	AKI ICA III (N=13)	TOTAL
MEAN AGE – yr	54.31 ± 11.89	53.7 ± 13.43	52 ± 11.34	58 ± 14.44	-
GENDER %(N)					
Male	15.5 (14)	17.7(16)	22.2 (20)	6.6 (6)	62.2 (56)
Feminine	10 (9)	6.6 (6)	13.3 (12)	7.7 (7)	40 (36)
ETIOLOGY OF CIRRHOSIS %(N)					
Alcoholic	13.3 (12)	14.4 (13)	22.2 (20)	5.5 (5)	55.5 (50)
Cardiac	1.1 (1)	-	-	-	1.1 (1)
AIH	-	-	1.1 (1)	-	1.1 (1)
NASH	2.2 (2)	1.1 (1)	6.6 (6)	3.3 (3)	13.3 (12)
NOT AFFILIATED	8.8 (8)	8.8 (8)	4.4 (4)	4.4 (4)	26.6 (24)
HBV	-	-	-	1.1 (1)	1.1 (1)
HCV	-	-	1.1 (1)	-	1.1 (1)
CHILD PUGH %(N)					
A	2.2 (2)	-	1.1 (1)	1.1 (1)	4.4 (4)
B	13.3 (12)	8.8 (8)	11.1 (10)	2.2 (2)	35.5 (32)
C	10 (9)	15.5 (14)	23.3 (21)	11.1 (10)	58.8 (53)
ASSOCIATED COMPLICATIONS					
Hemorrhage %(N)	14.4 (13)	7.7 (7)	8.8 (8)	4.4 (4)	35.5 (32)
Ascites %(N)	42.2 (38)				
GI	-	-	2.2 (2)	-	2.2 (2)
GII	3.3 (3)	6.6 (6)	12.2 (11)	6.6 (6)	28.8 (26)
GIII	2.2 (2)	3.3 (3)	3.3 (3)	2.2 (2)	11.1 (10)
ENCEPHALOPATHY (WH) %(N)	58.8 (53)				
I	-	-	-	-	-
II	13.3 (12)	7.7 (7)	16.6 (15)	6.6 (6)	44.4 (40)
III	-	5.5 (5)	3.3 (3)	5.5 (5)	14.4 (13)
IV	-	-	-	-	-
ACLF %(N)	31.1 (28)				
I	-	5.5 (5)	3.3 (3)	1.1 (1)	9.9 (9)
II	-	2.2 (2)	6.6 (6)	6.6 (6)	15.5 (14)
III	-	1.1 (1)	3.3 (3)	1.1 (1)	5.5 (5)
Associated Infections %(N)	34.4 (31)				
UTI	7.7 (7)	7.7 (7)	7.7 (7)	7.7 (7)	31.1 (28)
SBP	-	1.1 (1)	1.1 (1)	1.1 (1)	3.3 (3)
USE OF DIURETICS %(N)	25.5 (23)				
NO	21.1 (19)	20 (18)	22.2 (20)	11.1 (10)	74.4 (67)
YES	4.4 (4)	4.4 (4)	13.3 (12)	3.3 (3)	25.5 (23)

Table 2. Progression of kidney injury in cirrhotic patients.

PROGRESSION	SI 51.1% (N = 46)					NO 48.8 % (N = 44)				
AKI ICA% (N)	IA	IB	II	III	TOTAL	IA	IB	II	III	TOTAL
AKI	15.2 (7)	21.7 (10)	32.6 (15)	10.8 (5)	80.4 (37)	-	-	-	-	-
CKD	-	-	10.8 (5)	6.5 (3)	17.3 (8)	-	-	-	-	-
HRS	-	-	-	2.1 (1)	2.1 (1)	-	-	-	-	-
TREATMENT %(N)										
Albumin	-	10.8 (5)	26 (12)	13 (6)	50 (23)	-	18.1(8)	13.6(6)	4.5(2)	36.3(16)
Hyperhydration	15.2 (7)	10.8 (5)	17.3 (8)	6.5 (3)	50 (23)	32 (14)	13.6(6)	13.6(6)	4.5(2)	63.6(28)
NGAL >220mcg/g%(N)	23.91 (11)					11.36 (5)				
SEDIMENT %(N)										
Bacteria	-	-	4.3 (2)	-	4.3 (2)	4.5 (2)	2.2 (1)	2.2(1)	2.2 (1)	11.3(5)
Soft	-	-	-	-	-	11.3(5)	9 (4)	2.2(1)	-	22.7(10)
epithelial cells	-	-	2.1 (1)	-	2.1 (1)	-	-	-	-	-
Erythrocytes	-	-	-	-	-	2.2 (1)	2.2 (1)	-	-	4.5 (2)
Granular Casts	2.1 (1)	2.1 (1)	10.8 (5)	2.1 (1)	17.9 (8)	-	2.2 (1)	2.2 (1)	6.8 (3)	11.3 (5)
Hyaline Casts	-	-	6.5 (3)	2.1 (1)	8.6 (4)	-	-	2.2 (1)	-	2.2 (1)

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