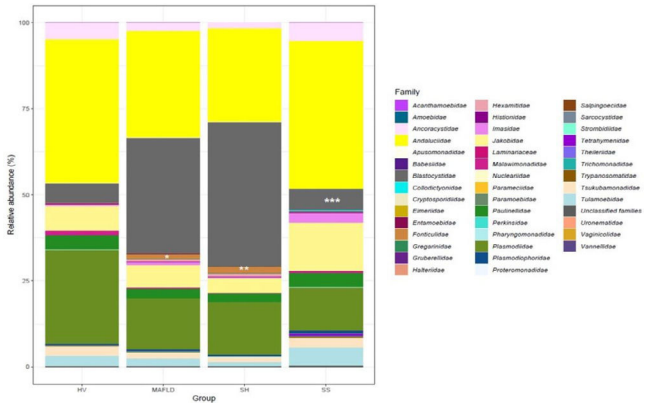

Figure. Relative abundance of the most prevalent functionally active protozoan families. * FDR = 1.26 × 10-7 when compared to HV, ** FDR = 2.9 × 10-18 when compared to SS, and *** FDR = 7.1 × 10-6 when compared to SH.

https://doi.org/10.1016/j.aohep.2023.101015

O-6 ENHANCED METABOLISM OF AROMATIC AMINO ACIDS AND LOW-DIVERSITY GUT MICROBIOTA: SIGNATURES OF HEPATIC ENCEPHALOPATHY IN DECOMPENSATED CIRRHOTIC PATIENTS FROM WESTERN MEXICO

Tonatiuh Abimael Baltazar-Díaz[1], Luz Alicia González-Hernández[2], Juan Manuel Aldana-Ledesma[3], Donovan Cortina-Romero[1], Marcela Peña-Rodríguez[4], Alejandra Natali Vega-Magaña[5], Sara Minia Zepeda-Morales[6], Rocío Ivette López-Roa[6], Susana Del Toro-Arreola[1], Miriam Bueno-Topete[1]

[1] *Institute for Research in Chronic-Degenerative Diseases, University Center of Health Sciences, Guadalajara University, Guadalajara, México*
[2] *VIH Unit, Civil Hospital of de Guadalajara Fray Antonio Alcalde, Guadalajara, México*
[3] *Gastroenterology Service, Civil Hospital of Guadalajara Fray Antonio Alcalde, Guadalajara, Mexico*
[4] *Laboratory for the Diagnosis of Emerging and Reemerging Diseases, University Center of Health Sciences, University of Guadalajara, Guadalajara, Mexico*
[5] *Biomedical Sciences Research Institute, University Center of Health Sciences, University of Guadalajara, Guadalajara, Mexico*
[6] *Pharmaceutical Research and Development Laboratory, University Center of Exact Sciences and Engineering, University of Guadalajara, Guadalajara, Mexico*

Introduction and Objectives: Alterations in the intestinal microbiota in decompensated cirrhosis are recognized as being critical in clinical evolution. The onset of hepatic encephalopathy (HE) worsens the prognosis. Metabolic functions related to intestinal microbiota, such as ammonia production and imbalance of amino acid biosynthesis, are believed to play a key role on the pathophysiology of HE. This study aimed to evaluate the composition and functions of the intestinal microbiota in patients with decompensated cirrhosis and HE.

Materials and Methods: Fecal samples from 31 decompensated cirrhotic patients (20 with HE, 11 without HE) and 18 age-balanced healthy controls (HC) were included. Microbial composition was characterized by 16S rRNA sequencing and analyzed using QIIME2. Metabolic pathways were inferred by PICRUSt2. SCFAs quantification was performed by gas chromatography (GC).

Results: Intestinal microbiota in HE group was characterized by a decreased α-diversity, compared to no-HE group ($p<0.01$) and HC ($p<0.001$); β-diversity was also different between HE vs. no-HE group ($p<0.05$) and HE vs. HC ($p<0.001$). Intestinal microbiota from HE was defined by the presence of taxa such as *Escherichia/Shigella*, Burkholderiales and Lactobacillales. Furthermore, no-HE was characterized by the presence of *Veilonella* and *Bacteroides*. Both groups were depleted of potential beneficial taxa, such as *Ruminococcus* or *Faecalibacterium*, which correlates with diminished levels of fecal SCFAs in these groups. Inferred metabolic pathways showed that HE group was characterized by an enhanced chorismate metabolism, which is a key precursor of aromatic amino acids, along with antibiotic resistance and ammonia-producing pathways. HE and no-HE group showed a significant increase in the metabolism of lipopolysaccharides.

Conclusions: The intestinal microbiota of HE patients exhibit a lower diversity compared with no-HE and HC. It is dominated by *Escherichia/Shigella* and characterized by an enhanced metabolism of aromatic amino acids precursors and ammonia-producing pathways, which suggests its participation in the pathophysiology of HE. These results are described for the first time in western Mexico.

https://doi.org/10.1016/j.aohep.2023.101016

O-7 LIVER TOXICITY OF TYROSINE KINASE INHIBITORS: A DESCRIPTIVE ANALYSIS FROM SLATINDILI NETWORK

Nelia Hernández[1], Fernando Bessone[2], Daniela Chiodi[1], Norberto Tamagnone[2], Inmaculada Medina-Caliz[3], María Isabel Lucena[3], Raúl Andrade[3]

[1] *Gastroenterology Clinic, Clinic's Hospital, University of the Republic, Montevideo, Uruguay*
[2] *Department of Gastroenterology, Centenary Hospital, National University of Rosario, Rosario, Argentina*
[3] *Digestive System CMU, Clinical Pharmacology Service, Institute of Biomedical Research Institute of Malaga and Nanomedicine Platform-IBIMA. BIONAND Platform, Virgen de la Victoria University Hospital, University of Malaga, ciberehd. Malaga, Spain*

Introduction and Objectives: Tyrosine kinases (TKs) are a family of proteins with a critical role in controlling cancer phenotypes, and many TK inhibitors (TKI) as anti-cancer agents are available. Mandatory black box warning has been issued for some TKI since 2012, and DILI is the most frequent adverse event quoted. This study aimed to describe the most crucial aspects of DILI linked to TKI in the SLATINDILI registry.

Materials and Methods: We revised data concerning liver injury related to any TKI in the SLATINIDLI registry and consigned epidemiological information, latency, implied drug, biochemical, severity, and evolution.

Results: From thirteen cases identified, imatinib and pazopanib represented four and three cases each. The mean age was 58 years, and eleven were female. Median latency was 64 days, with median ALT and ALP at the onset of 452 U/L (range 233-941) and 199 U/L (range 85-1621), respectively; a hepatocellular pattern was seen in

ten cases. Autoimmune/Allergic features were present in seven patients. Resolution of liver injury occurred on an average of 183 days. No death was consigned. Liver function tests (LFTs) worsened during an initial period (>7 days) after drug withdrawal in six patients (cases 1,2,3,5,9 and 12), and two of them were treated with corticoids. Table 1 resumes data.

Conclusions: Hepatocellular acute liver injury with/without jaundice is the most common presentation of DILI linked to TKI. Clinicians should be aware that LFTs may worsen after drug withdrawal and monitor these patients before making a treatment decision.

Age /Sex

Table

	Age /Sex	TKI /Likelihood Score*	Indication	Latency (days)	Pattern	TB onset/peak	ALT U/L onset/peak	Resolution (days)
r1*	61/F	IMATINIB/B	Leukemia	92	HC	1/11	791/880	510
2*	73/F	IMATINIB/B	Renal cancer	124	HC	1.85/3.19	941/988	138
3*	58/M	MASITINIB/-	ALS	14	HC	0.4/0.4	351/436	230
4	50/F	BOSUTINIB/D	Leukemia	43	HC	0.3/0.3	233/233	169
5*	28/F	IMATINIB/B	Leukemia	176	HC	3.6/24	658/658	217
6	68/M	PAZOPANIB/C	Renal cancer	64	M	3.7/3.7	775/445	-
7	75/F	PAZOPANIB/C	Renal cancer	44	M	11/11	508/508	203
8	75/F	PAZOPANIB/C	Renal cancer	-	HC	3.8/3.8	403/403	204
9*	40/F	LENVATINIB/D	HCC	42	HC	2.5/12.6	750/750	120
10	65/F	IMATINIB/B	Breast cancer	150	HC	0.89/0.89	452/452	62
11	70/F	BOSUTINIB/D	Leukemia	112	-	0.3/0.3	341/341	83
12*	49/F	PALBOCICLIB/	Breast cancer	28	HC	0.37/0.96	281/1796	76
13	41/F	CABOZANTINIB/E	Renal cancer	84	HC	0.34/0.34	247/247	-

*Likelihood of association with DILI, based upon the known potential of the drug to cause such injury. HCC hepatocellular carcinoma; ALS amyotrophic lateral sclerosis; HC hepatocellular pattern; M mixed pattern; M male; F: female.

https://doi.org/10.1016/j.aohep.2023.101017

O-8 CHARACTERIZATION AND EPIDEMIOLOGICAL CHANGES OF PATIENTS WITH HEPATITIS C VIRUS TREATED IN THE CHILEAN PUBLIC HEALTH SYSTEM FROM 2016 TO 2021.

Luis Salazar[1], Carlos Valdebenito[1], Alejandro Carvajal[1], Gonzalo Veloso[1], Herman Aguirre[1], Gabriel Mezzano[2,3]

[1] *Training Program in Adult Gastroenterology, University of Chile, Santiago, Chile*
[2] *Gastroenterology and Liver Transplantation Unit, Hospital del Salvador – University of Chile, Santiago, Chile*
[3] *Center for Digestive Disease Clinic, University of The Andes, Santiago, Chile*

Introduction and Objectives: International studies have described an epidemiological change in patients with the hepatitis C virus (HCV), with greater involvement of young people and risk groups. The reality in Latin America, particularly in Chile, is unknown. This study aimed to epidemiologically characterize HCV patients treated in the Chilean public health system (period 2016-2021) and compare these characteristics in two periods (2016 - 2019 vs. 2020 - 2021).

Materials and Methods: Historical cohort was constructed based on national data and the Hospital del Salvador registry (Santiago, Chile) (n=410). All patients diagnosed with HCV treated in the Chilean public system (2016-2019) and those treated at Hospital del Salvador (2020-2021 period) were included. It was registered: year of diagnosis, age, sex, presence of cirrhosis, HCV genotype, co-infection with hepatitis B virus (HBV) and/or HIV, need for a liver transplant, or intratreatment dead. Both periods were compared using the Mann-Whitney U test or Fisher's exact test, as appropriate.

Results: 61.2% of patients were male, with a median age of 57 years. 73.5% presented genotype 1 and 11.6% genotype 4. There was a 19.3% coinfection with HIV. Only 1.4% had therapy failure at 24 weeks and 5.2% of patients underwent liver transplantation. When comparing the periods 2016 – 2019 vs. 2020 – 2021 a reduction in the median age 59 vs 49 (p<0.001) was observed, with a higher proportion of male gender 79.0% vs 51.7% (p<0.001). There is evidence of change in the proportion of the genotypes, with genotype four being the second most frequent after genotype 1. The presence of co-infection with HIV was 49.7% vs. 3.0% (p<0.001) and HBV/HIV 15.5% vs. 0.8% (p<0.001). There was no difference in the percentage of sustained viral response (Table 1).

Conclusions: There is an epidemiological change in HCV patients, which suggests different routes of transmission and the need to refocus screening.

Table 1: Result and comparison of socio-demographic and clinical variables between the periods 2016-2019 and 2020-2021.

	Total (n = 410)	Period 2016-2019 (n = 267)	Period 2020-2021 (n = 143)	p-value
Age (years), median (p25, p75)	57 (46, 64)	59 (52, 66)	49 (36, 61)	<0.001
Male, n(%)	251 (61.2%)	138 (51.7%)	113 (79.0%)	<0.001
Period years, n(%)				
2016	48 (11.7%)	-	-	
2017	26 (6.3%)	-	-	
2018	183 (44.6%)	-	-	
2019	10 (2.4%)	-	-	
2020	71 (17.3%)	-	-	
2021	72 (17.6%)	-	-	
Genotype, n (%)				<0.001
1	285 (73.5%)	209 (78.9%)	76 (61.8%)	
2	7 (1.8%)	4 (1.5%)	3 (2.4%)	
3	50 (12.9%)	36 (13.6%)	14 (11.4%)	
4	45 (11.6%)	15 (5.7%)	30 (24.4%)	
3 and 4	1 (0.3%)	1 (0.4%)	0 (0.0%)	
HBV co-infection, n (%)	17 (4.1%)	3 (1.1%)	14 (9.8%)	<0.001
HIV co-infection, n (%)	79 (19.3%)	8 (3.0%)	71 (49.7%)	<0.001
HIV-HBV co-infection, n (%)	15 (4.4%)	2 (0.8%)	13 (15.5%)	<0.001
Cirrhosis, n (%)	214 (54.7%)	183 (68.5%)	31 (25.0%)	<0.001
Failure at 12 weeks, n (%)	9 (2.8%)	8 (3.8%)	1 (0.9%)	0.17
Failure at 24 weeks, n (%)	4 (1.4%)	3 (1.5%)	1 (1.3%)	1.00
Use of rescue therapy, n (%)	139 (35.2%)	256 (95.9%)	0 (0.0%)	<0.001
Liver transplant, n (%)	21 (5.2%)	20 (7.5%)	1 (0.7%)	0.002
Kidney transplant, n (%)	1 (0.2%)	1 (0.4%)	0 (0.0%)	>0.999
Other outcomes, n (%)				0.495
Therapy failure	12 (3.4%)	10 (4.3%)	2 (1.6%)	
SVR	334 (93.3%)	216 (92.3%)	118 (95.2%)	
Discontinues treatment	5 (1.4%)	4 (1.7%)	1 (0.8%)	
Deads	7 (2.0%)	4 (1.7%)	3 (2.4%)	

https://doi.org/10.1016/j.aohep.2023.101018

O-9 THE CHANGING EPIDEMIOLOGY OF HEPATOCELLULAR CARCINOMA IN SOUTH AMERICA: A REPORT FROM THE SOUTH AMERICAN LIVER RESEARCH NETWORK

Enrique Carrera Estupinan[1], Angelo Mattos[2], Javier Diaz Ferrer[3], Marina Farah[4], Domingo Balderramo[5], Estefania Liza Vaca[3], Marco Arrese Jimenez[6], Jhon Prieto Ortiz[7], Jose Debes[8]

[1] *Department of Gastroenterology and Hepatology, Eugenio Espejo Hospital, Quito, Ecuador*
[2] *Department of Gastroenterology, Federal University of Health Sciences of Porto Alegre, Porto Alegre, Brazil*
[3] *Department of Gastroenterology, National Hospital Edgardo Rebagliati Martins, Jesús María, Perú*
[4] *American University of Beirut*
[5] *Private University Hospital of Córdoba. University Institute of Biomedical Sciences of Córdoba. Córdoba, Argentina*
[6] *Department of Gastroenterology, Pontifical Catholic University of Chile. Santiago, Chile*
[7] *Liver and Digestive Disease Center (CEHYD), Bogotá, Colombia*
[8] *Department of Medicine, University of Minnesota. Minnesota, USA*