HEPATOCELLULAR CARCINOMA IN VERACRUZ: A SURVEILLANCE COMPARISON BETWEEN TREATMENTS

G.A. Salgado-Álvarez[1], A.D. Cano-Contreras[1], G. Martínez-Mier[2], M.J.J. García-Carvajal[1], P. Grube-Pagola[1], I. Morales-García[2], J.M. Remes-Troche[1]

[1] *Instituto de Investigaciones Médico-Biológicas. Universidad Veracruzana. México*
[2] *Unidad Médica de Alta Especialidad. Instituto Mexicano del Seguro Social. Ciudad de México, México*

Introduction and Objectives: In Mexico, hepatocellular carcinoma (HC) represents >90% of primary hepatic tumors. The diagnosis is determined by imaging findings (CT or MR). A biopsy is necessary for specific situations. The staging method is the Barcelona classification (BCLC) which considers hepatic biomarkers, the tumor burden and the performance status. Treatment options include transplantation, liver resection (LR), radiofrequency ablation (RFA), transarterial embolization (TACE/TAE) and systemic treatment (ST). Nonetheless, there are few surveillance studies in Mexico. The study aims to describe the surveillance of HC subjects after different therapeutic approaches.

Materials and Methods: Descriptive and retrospective study with a database including 130 patients diagnosed with HC by imaging findings (or biopsy if needed) between 2005 and 2021 in Veracruz. For statistical analysis, surveillance data was first summarized by descriptive statistics and 5-year-overall survival rates (5OS). Subsequently, a comparison of surveillance between therapeutic options was made by Log-Rank, Cox regression and $\chi 2$. We considered statistical significance at $p<0.05$.

Results: A total of 130 patients were diagnosed with HC,128 patients were analyzed after 2 exclusions due to missing data, 45 (35%) of them died during the follow-up. The distribution of descriptive data is detailed in Table 1. We observed longer accumulated overall surveillance in patients who underwent LR (5OS: 73%), followed by RFA (5OS: 28%), $\chi 2$: 10.7, p=0.02. When analyzing data by BCLC we found a poor difference in surveillance between treatments ($p>0.05$). Recurrence of the tumor was only observed in stage B: 5 cases after LR (29.4%), and 2 cases after RFA (22.2%), $\chi 2$=12.084 p=0.017. The mean time for recurrence detection was 19 months and five months for LR and RFA, respectively. Discussion: This analysis showed higher accumulated surveillance for patients with LR, followed by RFA. Furthermore, Log-Rank curve of RFA showed a pronounced inclination of surveillance around the 25th month, after which it reached a plateau and deceleration until the 75th month. However, five year-OSr seemed to be lower than in other studies.

Conclusion: Our results suggest that LR is a feasible treatment alternative. In the meantime, RFA seems a worthy option when patients are not candidates for LR, showing promising results.

The authors declare that there is no conflict of interest.

Table 1
Surveillance time according staging

		χ^2	p	Tx	n 128 (%)	Surveillance (Months)			
						M	SD	Me	SD
Barcelona Classification	**A**	**3.0**	**0.3**	**NT**	4 (10.8)	10	3	10	6
				LR	12 (32.4)	49	14	24	50
				RFA	8 (21.6)	14	4	12	11
				ST	13 (35.1)	11	3	9	10
				Global	37 (100)	24	6	10	34
	B	**3.2**	**0.5**	**NT**	16 (21.9)	7	1	7	6
				LR	18 (24.7)	34	8	25	35
				RFA	11 (15.1)	26	7	15	24
				ST	25 (34.2)	12	2	11	9
				TACE	3 (4.1)	7	3	6	5
				Global	73 (100)	18	3	11	23
	C	**5.9**	**0.1**	**NT**	7 (53.8)	5	2	4	4
				LR	1 (7.7)	3	N/A	3	N/A
				RFA	1 (7.7)	10	N/A	10	N/A
				ST	4 (30.8)	23	6	25	12
				Global	13 (100)	11	3	7	11
	D	N/A	N/A	**NT**	5 (100)	5	N/A	5	2
				Global	5 (100)	5	N/A	5	2

https://doi.org/10.1016/j.aohep.2021.100608

HEPATOCELLULAR CARCINOMA: CLINICAL AND EPIDEMIOLOGICAL FEATURES IN VERACRUZ

M.J.J. García-Carvajal[1], A.D. Cano-Contreras[1], G. Martínez-Mier[2], G.A. Salgado-Álvarez[1], I. Morales García[2], P. Grube-P[1], J.M. Remes-Troche[1]

[1] *Instituto de Investigaciones Médico-Biológicas. Universidad Veracruzana. México*
[2] *Unidad Médica de Alta Especialidad. Instituto Mexicano del Seguro Social. Ciudad de México, México*

Introduction and Objectives: Hepatocellular carcinoma (HCC) is the most frequent liver tumor and it occupies sixth place of the malignant neoplasms worldwide. In the last decades, In Mexico has been reported an increase of 95% in incidence and 14% in mortality, becoming the second most lethal neoplasm after pancreatic cancer. Few studies describe the HCC epidemiological behavior in our population.

Objective: To describe the clinical and epidemiological features of HCC in patients from Veracruz city.

Material and methods: A descriptive and retrospective study was done from a patient database with diagnosed HCC by imaging and, if required, with a biopsy confirmation between 2005 and 2021 in Veracruz. Central tendency and dispersion measures were done for the analysis.

Results: 130 patients with HCC were studied, the mean diagnosis age was 66.9±11 (29-62 rate), with a female genre lead 1.2:1. Eighty-six patients (66.2%) had cirrhosis at the diagnosis, 32 (24.6%) were secondary to chronic alcohol consumption, 8 (6.2%) with hepatitis C infection, 20 (15.4%) MAFLD/ Cryptogenic and 3 (2.3%) with hepatitis B infection. The comorbidities reported were overweight in 58 patients (43.9%), obesity 19 (14.4%), high blood pressure 54 (40.2%) and diabetes mellitus 51 (38.6%). The most frequent biochemical disturbance was hyperbilirubinemia (1.27± 1.26). The rest f biochemical features are described in table 1. Sixty-six patients (50%) were found with Child-Pugh A with a MELD score of 9.86±3.0. In this stage, we found 74 patients (56.9%) with Barcelona B, 80% had a lone tumor, the mean tumoral size was 7.13±3.7 cm. 69.2% of patients had a tumoral size greater than 5 cm at the diagnosis.

Discussion: Our results show that the HCC behavior is similar to the reported in previous Mexican studies, predominating in patients with advanced liver injury and tumor outside criteria of local treatment at the diagnosis. The high frequency of comorbidities associated with metabolic syndrome is remarkable as one of the main risk factors with chronic C virus infection.

Conclusion: HCC in Mexico has been increasing. It shows similar epidemiological features with the reported in other populations due to its relationship with metabolic risk. Early screening in high-risk patients results in greater resectability and survival.

The authors declare that there is no conflict of interest.

Table 1
Clinical and biochemical features in patients with Hepatocellular carcinoma

Age	66.9±11
Sex % (Female / Male)	53.8 (70) / 46.2 (60)
HC etiology % (Alcohol/ Cryptogenic MAFLD/ HCV / HBV)	32(24.6) / 20(15.4) / 8(6.2) / 3(2.3)
Comorbidities (Overweight/ Obesity/ HBP/DMT2)	58 (43.9) / 19(14.4) / 53(40.2) / 51 (38.6)
Child-Pugh % (A, B, C)	50% (65)/ 14.6% (19)/ 1.5% (2)
BCLC % (A, B, C, D)	28.5% (37)/ 56.1% (74)/ 10.8% (14)/ 3.8% (5)
ECOG % (0,1,2,3)	21.2% (11)/ 50% (26)/ 26.9% (14)/ 1.9% (1)
Ascites %	10.8% (14)
ALT (UI/L)	46±29
AST (UI/L)	67.6±54
BT (mg/dl)	1.27±1.6
Albumin (mg/dl)	3.55±0.6
Platelets (x 1,000)	174±103
Prothrombin time (s)	15±3.4
INR	1.17±0.1
Serum alphafetoprotein (ng/nL)	5135.1±26422
MELD	9.86±3.0
Tumor diameter (cm)	7.13±3.7
Number of tumors	1.37±1

https://doi.org/10.1016/j.aohep.2021.100609

A MULTICENTER REAL-WORLD COHORT TO VALIDATE THE EFFICACY AND SAFETY OF DIRECT ANTIVIRAL AGENTS FOR HEPATITIS C, AND RELATED RISK FACTORS FOR NON-SVR IN DECOMPENSATED CIRRHOSIS

F. Higuera-de-la-Tijera[1], N.C. Flores-García[2], D. Kershenobich[2], E. Cerda-Reyes[3], M.S. González-Huezo[4], J.L. Pérez-Hernández[1,5], N. Méndez-Sánchez[6], O. Morales-Gutiérrez[1], J.E. Lira-Vera[1], P. Alagón-Fernández-del-Campo[1], F.Y. Vargas-Durán[1], K. Soto-Martínez[1], G.M.L. Guerrero-Avendaño[1], A. Servín-Caamaño[1], J.G. Gándara-Calderón[3], D. García-Domínguez[4], L.E. Díaz-Orozco[6], N. García-Casarreal[7], S. Mejía-Loza[8], I.B. Lázaro-Pacheco[9], E. Rodríguez-Fuentes[1]

[1] *Hospital General de México "Dr. Eduardo Liceaga". Ciudad de México, México*
[2] *Instituto Nacional de Ciencias Médicas y Nutrición* "Salvador Zubirán". *Ciudad de México, México*
[3] *Hospital Central Militar. Ciudad de México, México*
[4] *Centro Médico ISSEMyM Metepec, Edo. de México, México*
[5] *Hospital Central Sur, PEMEX. Ciudad de México, México*
[6] *Fundación Clínica Médica Sur. Ciudad de México, México*
[7] *Hospital Regional 1° de Octubre, ISSSTE*
[8] *Hospital Juárez de México*
[9] *ISSSTE Oaxaca. Oaxaca, México*

Introduction and Objectives: Clinical trials demonstrated the efficacy and safety of direct antiviral agents (DAA) to treat hepatitis C virus infection (HCV) in patients with decompensated cirrhosis (DC); however, very few real-world studies have been reported in this group. Moreover, predictive factors for non-achieving sustained virological response (SVR) in DC are not entirely understood. Therefore, the aim was to verify the efficacy and safety of DAA and to identify risk factors for failure to achieve SVR in DC.

Materials and Methods: A real-world cohort study included HCV patients with DC [Child-Pugh B/C or A but with a history of previous clinical decompensation events like variceal bleeding (VB), hepatic encephalopathy (HE), or ascites]. All patients treated before transplant had MELD ≤ 20 and Child-Pugh ≤ 12 according to AASLD guidelines.

Results: 222 patients, 118 (53.2%) were women, mean age 57.2±11.5 year-old, 61 (27.5%) were treated with Sofosbuvir (SOF)/Ledipasvir, 152 (68.5%) with SOF/Velpatasvir, and 9 (4.1%) with SOF/Daclatasvir, 175 (78.8%) used also ribavirin, 209 (94.1%) achieved SVR, despite non-significant difference, Child-Pugh C patients had a suboptimal response (SVR < 95%): A 42/44 (95.5%), B 140/147 (95.2%), C 27/31 (87.0%), p=0.2. Related adverse events were fatigue 60 (27%), nausea 44 (19.8%), headache 43 (19.4%), non-severe peripheral edema 10 (4.5%), anasarca 4 (1.8%), jaundice 6 (2.7%), 3 hemolytic anemia (1.4%), 1 dermatosis (0.4%), congestive cardiac failure 2 (0.9%), need to suspend therapy due to liver-related adverse events 2 (0.9%) they also died. In those who achieved SVR, MELD improved (basal 12.4±3.3 vs. post-SVR 10.9±3.5; p<0.0001); but was worse in those without SVR (basal 16.2±3.9 vs. without-SVR 17.3±6.2; p=0.24). Times/year needing hospitalization for liver-related decompensation events were less frequent in those who achieved SVR (basal 1.7±1.3 vs. after SVR 0.4±0.7; p<0.0001) but remained without change in that without-SVR (basal 1.5±1.5 vs. after non-achieve SVR 2.2±1.9; p=0.04).

Discussion: A few real-world studies have been conducted in DC with hepatitis C. However, in the Mexican population, our study is the first that demonstrated in a real-world setting, similar to clinical trials, that DAA based on SOF and free of protease inhibitors (PIs) are effective and safe to cure HCV in DC. When to treat HCV before or after liver transplantation can be challenging. Classically, MELD >20 and Child-Pugh C >12 are related to non-SVR; however, our study also shows that additional clinical factors have a negative impact on SVR: history of recurrent VB and episodic and persistent HE; therefore, these criteria should also be considered to decide to treat previous or after liver transplantation. In addition, acute decompensation and mortality events are very high in those who do not achieve SVR.

Conclusions: SOF based on regimens without PIs are effective and safe in VHC with DC. Additional to classic criteria (MELD >20, Child-Pugh > 12), recurrent VB and HE are predictors of failure to achieve SVR in VHC with DC.

The authors declare that there is no conflict of interest.

Table 1
Comparison of characteristics of the cohort according to the response to DAA therapy

Variable	SVR n=209	Without-SVR n= 13	p	OR (95%CI)
Basal characteristics				
Age, year-old	57.3±11.3	55.7±14.9	0.63	-
Transition elastography, KPa	28.8±12.9 (n=181)	41.7±21.6 (n=10)	0.09	-
Child-Pugh, points	8±1	9±2	0.05	-
MELD, points	12.4±3.3	16.2±3.9	<0.0001*	-
Viral load, IU/mL	2,219,130	2,368,392	0.96	-
Episode of variceal bleeding, n(%)	137 (65.6)	10 (76.9)	0.55	1.2 (0.9-1.6)
Recurrent variceal bleeding, n(%)	46 (22.0)	10 (76.9)	<0.0001*	3.5 (2.4-5.2)
Ascites, n(%)	123 (58.8)	10 (76.9)	0.25	1.3 (0.9-1.8)
	76 (36.4)	9 (69.2)	0.03*	1.9 (1.3-2.9)

(*continued*)