

CLINICAL, BIOCHEMICAL, AND IMAGE CHARACTERISTICS IN PATIENTS WITH A DIAGNOSIS OF AMEBIC AND BACTERIAL LIVER ABSCESS.

C.A. Campoverde-Espinoza, A. Martínez-Tovar, F. Higuera de la Tijera

Hospital General de México "Dr. Eduardo Liceaga".
Ciudad de México, México

Introduction and Objectives: A hepatic abscess (HA) accumulates purulent material in the liver parenchyma and can be of bacterial, parasitic, fungal, or mixed origin. The incidence ranges from 2.3 to 22 per 100,000 people. In Mexico, the annual incidence of amoebic liver abscess is 6.7 per 100,000 population.

IAM: To determine the clinical, biochemical, and imaging characteristics in patients diagnosed with amoebic and bacterial liver abscess.

Materials and Methods: Research design: Descriptive, cross-sectional/prevalence.

Procedure: We analyzed medical records of patients admitted during 2019 with a diagnosis of liver abscess and who had an amoeba PCR test. The qualitative variables were expressed in frequencies and percentages; the numerical variables were mean and standard deviation. We use X², Fisher's exact, Student's t, and Mann-Whitney U to compare groups as appropriate.

Results: Of a total of 32 patients admitted with a liver abscess in Gastroenterology during 2019, 20 patients treated with drainage and PCR test for amoeba of the abscess fluid were included. Of these, 85%(17) were men with a mean age of 45.35±10.93 years, and 55%(11) were of bacterial etiology. Regarding the characteristics due to their etiology (amoebic vs. bacterial): 30%(6) were presented in segments VII and VIII; [33.3%(2/6) amoebic vs. 66.7%(4/6) bacterial]. According to the number, they were multiple; 28.6%(2/7) amoebic vs 71.4%(5/7) bacterial, unique; 53.8%(7/13) amoebic vs 46.2%(6/13) bacterial, without significant difference (p=0.37). 60%(12) presented with pleural effusion, and of these, 58.3%(7) were amoebic. 100% were drained, of which 50% were by catheter with a diameter of 14Fr. Regarding the laboratory studies: 80%(16) of those with amoebic etiology had cultures of the abscess fluid without development, the leukocytes were 18.65 ± 6.55mm³ with a range of 16.5 in the amoebians vs. 14.58±6.51mm³ with a range of 17.6 in bacteria, Hb of 12.10±1.93 gr/dl in amoebians vs. 12.18 ± 1.72 gr/dl in bacteria and with procalcitonin of 18.06±12.77 gr/dl in amoebic vs. 19.98±59.76 gr/dl in bacterial. According to the imaging studies: the USG diameter was 10.67±2.78cm in amoebians vs. 10.53±4.91cm in bacteria and with a volume of 375.08±263.95 with a range of 782.0cm³ in amoebic vs. 441.80±393.90 with a range of 1362.1cm³ in bacterial.

Discussion: Common etiologic agents for HA are *E. histolytica* (amoebic), bacterial (pyogenic), *Mycobacterium tuberculosis*, and various fungi. They tend to affect the younger population, especially men with immunosuppression, diabetes, and alcohol consumption. In developing countries, two-thirds are of amoebic origin and in need of puncture drainage. Our study observed that half had amoebic etiology corroborated by amoeba PCR, the majority unique, and almost all required drainage with diameters greater than 5cm by USG.

Conclusions: In the present work, we can show that half of the patients diagnosed with a liver abscess in the Gastroenterology Service are of amoebic origin and have similar characteristics to those described in the international bibliography.

The authors declare that there is no conflict of interest.

<https://doi.org/10.1016/j.aohep.2021.100625>

IMPACT OF RISK FACTORS IN THE SCRUTINY AND DIAGNOSIS OF HEPATITIS C

J. Méndez-Navarro¹, R.A. Chirino-Sprung², A. Azamar-Alonso³, D. Kershenobich⁴

¹ Assoc. Director, Medical Affairs, Gilead Sciences Mexico

² Sr. Director, Medical Affairs LATAM, Gilead Sciences

³ Assoc. Director, Global Value & Access, Gilead Sciences

⁴ General Director, National Institute of Medical Sciences and Nutrition "Salvador Zubirán", Mexico City, Mexico

Introduction: Chronic hepatitis C is considered a public health problem. Risk factors for infection traditionally identified as blood transfusion, major surgeries, organ donation, hemodialysis, vertical transmission have undergone an epidemiological transition. Other risk factors have become the main causes of new infections, such as intravenous drug use, sexual intercourse, prison, and tattoos.

Objective: To describe the risk factors associated with the positivity of Hepatitis C by analyzing the epidemiological profile of populations at high risk for Hepatitis C.

Methods: A cross-sectional study was carried out in the Mexican population as part of an HCV 2-years screening program implemented from December 2017 to December 2019. People were invited to participate in the program mainly in public health institutions, or through special campaigns in state and federal social rehabilitation centers and prisons. Adults (> 18 years) with informed consent were included for the study. Participants received a multiple-choice questionnaire to identify sociodemographic variables and the existence of any risk factor for HCV. A rapid test for HCV was performed and those participants whose results were reactive were applied a PCR test to determine quantification of HCV RNA. For the statistical analysis, the population was classified according to risk, as a general population with at least one risk factor and a high-risk population. A logistic regression model adjusted for sociodemographic variables and risk factors for the general population was developed to analyze the factors that may be associated with HCV positivity.

Results: This national cross-sectional cohort included 297,397 eligible subjects with a rapid test performed. Of the total number of rapid tests carried out, 13,085 subjects were reactive (4.4%) and 9,426 subjects (3.2% of the total population) were confirmed as positive by PCR test. The prevalence of viremia in the general population was 2.5%, while in the population with HIV was 3.1% and in persons deprived of their liberty (CERESO) was 18.5%. (Table) The median age in the total population was 43 years. Jalisco (10.1%) and Colima (7.7%) were the states with the highest percentage of positive results, followed by Baja California (7.4%). The percentage of people with viremia increases with age, going from 1.1% in the group of 18-29 years to more than 4.7% in those older than 60 years. In this cohort, the most common risk factors were history of acupuncture/ tattooing/ piercings (21%), intravenous drug use (15%), and high-risk sexual practices (12%). From the logistic regression by risk population, we found that having at least one risk factor increased the odds of being HCV positive by 62% (OR = 1.62, IC 95% 1.54-1.69), compared with the population without risk factors. When conducted the analysis by type of specific population, the results showed that incarcerated people were 55 times more likely to be positive for Hepatitis C and 14 times more likely to be positive to HCV, compared to the HIV positive population.

Conclusions: In this cross-sectional study with different high-risk populations for detecting hepatitis C, we identified 3.2% of viremic patients who were linearly related to older age and the existence of risk factors. Based on the results for this analysis, screening and

diagnosis in high-risk populations, even those that are routinely marginalized, could be more effective.

The authors declare that there is no conflict of interest.

Population	RT performed (%)	RT reactive (%)	PCR positive (%)
Total	297,397	13,085 (4.4)	9,426 (3.2)
General population*	245,156 (82.4)	9,023 (3.7)	6,225 (2.5)
Population in risk			
HIV	33,292 (11.2)	1,478 (4.4)	1,028 (3.1)
PWID	15,652 (5.3)	1,268 (8.1)	1,001 (6.4)
PRISON (CERESO)	2,392 (0.3)	1,098 (24.1)	1,005 (18.5)

RT: Rapid test. *General population with at least one risk factor. HIV: Subjects screened in HIV clinics. PWID: people who inject drugs. CERESO: State Center for Social Re-adaptation

<https://doi.org/10.1016/j.aohep.2021.100626>

CLEAR CELL HEPATOCELLULAR CARCINOMA, A CASE REPORT

M. Velasco-Gutiérrez, K.M. Ortiz-Aguirre,
F.I. García-Juarez, E.M. Zamayoá-Cervantes

Instituto de seguridad y servicios sociales de los trabajadores del estado, México

Introduction and Objectives: Clear Cell Hepatocellular Carcinoma (CCHCC) represents 2.2 to 6.7% of all Hepatocellular Carcinomas (HCC), affects mostly women and is frequently associated with liver cirrhosis, viral infections (HBV, HCV), aflatoxins, hemochromatosis, oral contraceptives, obesity and type 2 diabetes mellitus. The most frequent manifestation is a solitary tumor with a pseudocapsule, which is more frequent than in other subtypes of HCC. Histologically, CCHCC can be observed as cells with an empty appearance with abundant cytoplasm, vacuolated and foamy due to the accumulation of glycogen and fat, constituting more than 50% of the total cells. Differential diagnosis with liver metastases can be difficult, so immunohistochemistry is an important diagnostic tool.

Clinical Case: 69-year-old female with a history of hepatitis C virus infection in 2018 receiving direct-acting antiviral treatment for 12 weeks with sustained viral response-12, Child Pugh B liver cirrhosis is documented. 2 years later, the follow-up ultrasound reports liver injury cystic and alpha-fetoprotein at 84.27 ng / ml, so a triphasic tomography was performed, observing liver lesion in segment VII of 35 × 27 × 31 mm suggestive of hepatocellular carcinoma with atypical characteristics, no tumors were reported in another abdominal site, as there was no conclusive radiological criterion for hepatocellular carcinoma, a liver lesion biopsy was performed with a histological report of moderately differentiated clear cell carcinoma and immunohistochemistry with Hepatocyte antigen positive, Carcino-embryonic antigen negative, internal Arginase 1 positive, Glypican 3 positive and Internal renal carcinoma antigen negative, concluding diagnosis of clear cells hepatocellular carcinoma T1B, N0, M0, therefore the patient was referred for transarterial chemoembolization of the lesion.

Discussion: The importance of the current report is to identify histopathological characteristics and establish the usefulness of Immunohistochemistry to make a differential diagnosis with other tumors that can metastasize to and be confused with a primary CCHCC of the liver.

Conclusions: CHCC is a rare subtype of HCC with a more favorable prognosis than other forms of hepatocellular carcinoma, the histological differential diagnosis through immunohistochemistry should be performed with renal cell carcinoma, adrenal cortical carcinoma, clear cell sarcoma, angioliomas, pulmonary and neuroendocrine clear cell variant, which can metastasize to the liver and be confused.

The immunohistochemical study was decisive for the treatment and favorable prognosis of the patient.

The authors declare that there is no conflict of interest.

<https://doi.org/10.1016/j.aohep.2021.100627>

FRUCTOSE DIET INDUCES A METABOLIC REPROGRAMMING TO ENHANCE TUMOR AGGRESSIVENESS

L. Chávez-Rodríguez^{1,2,3}, A. Escobedo-Calvario^{1,2,3},
A. Simoni-Nieves², L. Bucio^{2,3}, V. Souza^{2,3},
R.U. Miranda Labra^{2,3}, G.C. Enriquez-Cortina⁴,
F. Masso⁵, A. Páez Arenas⁵, D.F. Calvisi⁶,
M.C. Gutiérrez-Ruiz^{2,3}, L.E. Gómez-Quiroz^{2,3}

¹ Posgrado en Biología Experimental, DCBS, Universidad Autónoma Metropolitana-Iztapalapa, México City, México

² Área de Medicina Experimental y Traslacional, Departamento de Ciencias de la Salud, Universidad Autónoma Metropolitana-Iztapalapa, México City, México

³ Laboratorio de Medicina Experimental, Unidad de Medicina Traslacional, IIB, UNAM Instituto Nacional de Cardiología "Ignacio Chávez", México City, México

⁴ Departamento de biomedicina cardiovascular, Instituto Nacional de Cardiología "Ignacio Chávez", México City, México

⁵ Departamento de Fisiología y biología molecular, Instituto Nacional de Cardiología "Ignacio Chávez", México City, México

⁶ Institut für Pathologie, Universitätsklinikum Regensburg, Germany

Introduction and Objectives: HCC is one of the main causes of cancer-related death worldwide and has third place in mortality. One of the main risk factors is metabolic-associated fatty liver disease (MAFLD), having hepatic steatosis, and related metabolic disorders. Mexican population has the highest obesity rate in both children and adults, and the consumption of hypercaloric diets has been related to that. Also, Mexico is in the top five countries with a higher fructose-enriched diet consumption and has been proved already the relation between fructose consumption and MAFLD. Likewise, fructose has been related to metabolic rewiring in transformed cells, enhancing aggressiveness and survival.

Aim: To analyze fructose role on aggressiveness promotion of HCC cells.

Materials and Methods: We used C57Bl/6J mice strain (both sex) with a high Fructose diet (Fru) (33% of fructose in the drinking water, *ad libitum*). Fru supplementation started with 15 days-old mice, two days after DEN was injected (10 µg/Kg, i.p), and the treatment was ended 8 months later. The UAM ethics committee approved the protocol. *In vitro* studies were carried out with the Huh-7 HCC cell line and we evaluated metabolic and biochemical parameters.

Results: Tissue samples were analyzed by H&E. We observed that the fructose-enriched diet group mice presented fat accumulation in the hepatocytes and also areas with a greater inflammatory infiltrate (Fru). Mice in the fructose-enriched diet + DEN (Fru/HCC) group showed a marked difference between the tumor area and the surrounding tissue and an increase in the number of bile ducts, indicating liver tissue damage. Also, we analyzed the protein content of some lipogenic enzymes and noticed an increment in fatty acid synthase (Fasn) in Fru and Fru/HCC. Due to that, we analyzed if Fru treatment was inducing metabolic rewiring in transformed cells. We obtained metabolic changes in fructose-treated cells, reducing the