Sandra Tochetto[4], Maria Cristina Chammas[4], Denise Paranaguá-Vezozzo[1], Edmund Baracat[4], José Tadeu Stefano[1], Alex Cassenote[1], João Renato Pinho[1], Flair Carrilho[1], Oliveira Claudia P.[1]

[1] *Division of Clinical Gastroenterology and Hepatology, University of São Paulo School of Medicine, São Paulo, Brazil*
[2] *Division of Endocrinology, University of São Paulo School of Medicine, São Paulo, Brazil*
[3] *Division of Obstetrics and Gynecology, University of São Paulo School of Medicine, São Paulo, Brazil*
[4] *Radiology Institute, Hospital das Clínicas, University of São Paulo School of Medicine, São Paulo, Brazil*

Introduction: The patatin-like phospholipase 3 gene polymorphism (PNPLA3) has been consistently associated with non-alcoholic fatty liver disease (NAFLD) and its histological severity on different populations. In addition, increasing evidence demonstrates the association of NAFLD and polycystic ovary syndrome (PCOS), both associated with obesity, insulin resistance (IR) and metabolic syndrome (MS).

Aim: Describe the prevalence of the PNPLA3 gene polymorphism and its impact on NAFLD susceptibility and progression in women with PCOS.

Methods: This was a cross-sectional study enrolling 163 patients with PCOS. All the patients were evaluated for the presence of the PNPLA3 (rs738409 c.444C>G) polymorphism, hepatic steatosis at ultrasound and metabolic disorders. In patients with steatosis, transient hepatic elastography was performed to assess liver stiffness.

Results: In this population, evidence of hepatic steatosis was observed in 72.4% of them. The polymorphism was present in heterozygosis (CG) in 41.7% and in homozygosis (GG) in 8% of patients and was not statistically associated with the occurrence of NAFLD or clinically significant fibrosis (≥ F2). IR had a prevalence of 75% and, after evaluation by a multiple regression model, it was the main factor associated with the risk of NAFLD (B = 1.405, p = 0.026). A synergistic effect between IR and the presence of polymorphism on increasing the risk of NAFLD was observed (B = 2.047, p = 0.042). HDL values ≥ 49 mg/dL showed a negative association with NAFLD (B = - 1.578, p = 0.001). MS and IR, waist circumference, higher values of transaminases and lower levels of dehydroepiandrosterone sulfate were associated with clinically significant fibrosis.

Conclusion: The PNPLA3 gene polymorphism did not present an independent association either with NAFLD or the development of clinically significant fibrosis in women with PCOS. However, the polymorphism interacts synergistically with IR and increases the risk of NAFLD.

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O-15 ABSENCE OF DISEASE REMISSION AS A RISK FACTOR FOR HEPATOCELLULAR CARCINOMA IN PATIENTS WITH AUTOIMMUNE HEPATITIS

Nayana Fonseca Vaz[1], Julia Fadini Margon[1], Bruna Damasio Moutinho[1], Michele Harriz Braga[1], Claudia Megumi Tani[2], Regiane Saraiva de Souza Melo Alengar[2], Lisa Rodrigues da Cunha Saud[2], Denise Cerqueira Paranaguá Vezozzo[1], Marta Deguti[1], Natally Horvat[2], Eduardo Luiz Rachid Cançado[1,3], Flair Jose Carrilho[1,2], Aline Lopes Chagas[1,2], Débora Terrabuio[1]

[1] *Department of Gastroenterology, Hospital das Clínicas da FMUSP, São Paulo, Brazil*
[2] *São Paulo Clinicas Liver Cancer Group, Instituto do Câncer do Estado de São Paulo, São Paulo, Brazil*
[3] *Immunopathology and Zoonoses, Institute of Tropical Medicine of São Paulo, São Paulo, Brazil*

Background and Aims: Hepatocellular carcinoma (HCC) occurrence is rare in autoimmune hepatitis (AIH) and data about its characteristics are still scarce. The aims of this study were to describe HCC prevalence and risks factors in AIH patients in a tertiary referral hospital.

Methods: Retrospective cohort of AIH patients followed from 2003 to 2019. The hazard ratios (HR) and their respective 95% confidence intervals (95%CI) were estimated using simple Cox regression. A multivariate regression model was fitted using relevant covariates for HCC occurrence.

Results: Among 355 AIH patients, 84.5% were female, 85% AIH-1, 65% with cirrhosis and mean age at AIH diagnosis of 27±18yr. Sixteen cases of HCC were diagnosed (4.5%), all of them in cirrhotic patients, 81.3% female, mean age of 49±20yr, 83% overweight (BMI 34±5kg/m^2) and 3 with associated steatohepatitis. The pooled incidence rate for HCC was 3.2 per 100 patient-years. The pooled incidence of HCC in patients with cirrhosis at AIH diagnosis was 4.5 per 100 patient-years. The median time between AIH diagnosis and HCC was 9 years (1-42). At univariate analysis the factors associated with HCC risk were age at diagnosis of AIH (HR,1.05; 95%CI,1.02-1.08; p<0.001), platelet count $<100 \times 10^6/mm^3$ (HR,4.77; 95%CI, 1.73-13.17; p=0.003), presence of portal hypertension (HR,2.72; 95%CI,0.79-9.29; p=0.001), diabetes (HR,3.89; 95%CI,1.18-12.7; p=0.025) and disease remission at any time of follow up (HR,0.14; 95%CI,0.05-0.41; p<0.001). At multivariate analysis the factors associated with HCC risk were age at diagnosis (HR,1.05; 95%CI,1.027-1.083; p<0.001) and portal hypertension (HR,4.88; 95%CI,1.49-15.92; p=0.009). The occurrence of disease (AIH) remission during follow up was associated with lower risk of HCC (HR,0.128; 95%CI,0.043-0.38; p<0.001).

Conclusions: The prevalence of HCC in this cohort was 4.5%. Advanced age at diagnosis, diabetes, platelet count $<100 \times 10^6/mm^3$, presence of portal hypertension and absence of disease remission during treatment were associated with greater risk of HCC.

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O-16 EVALUATION OF THE RESPONSE TO TREATMENT OF VITAMIN D DEFICIENCY IN PEDIATRIC PATIENTS WITH CHRONIC LIVER DISEASE

Carolina Roos Mariano da Rocha[1], Carlos Oscar Kieling[2], Marina Rossato Adami[2], Renata Rostirola Guedes[2], Guilherme Guaragna Filho[1,3,4], Sandra Maria Gonçalves Vieira[1,2,4]

[1] *Universidade Federal do Rio Grande do Sul, Programa de Pós Graduação em Saúde da Criança e do Adolescente, Porto Alegre – RS (Brasil)*
[2] *Hospital de Clínicas de Porto Alegre, Serviço de Pediatria, Unidade de Gastroenterologia e Hepatologia Pediátrica, Programa de Transplante Hepático Infantil, Porto Alegre – RS (Brasil)*
[3] *Hospital de Clínicas de Porto Alegre, Serviço de Pediatria. Porto Alegre – RS (Brasil)*
[4] *Universidade Federal do Rio Grande do Sul, Departamento de Pediatria, Porto Alegre – RS (Brasil)*

Background: Vitamin D deficiency prevalence is high in children with chronic liver disease and there is no consensus about its best treatment.

Objective: To evaluate the prevalence of vitamin D deficiency in children with chronic liver disease, to identify clinical and laboratorial features related to it and to evaluate the response of treatment with 6000IU per day of cholecalciferol for 60 days or more.

Methods: Historical cohort that included patients younger than 18 years old, followed in Pediatric Hepatology Unit of Hospital de Clínicas de Porto Alegre from January 2015 to November 2020, who had at least one dosage of 25(OH)D before liver transplantation. Laboratorial data were evaluated before and after treatment with cholecalciferol. Clinical and laboratorial features of the group that responded to treatment was compared with the group that did not respond. Data were collected from patient's electronic charts.

Results: Ninety-six patients were included in the study. The prevalence of vitamin D deficiency was 67.7%. Patients with vitamin D deficiency were younger than patients without deficiency ($p<0.001$), had higher PELD, MELD and Child-Pugh scores ($p=0.002$ e $p<0.001$ respectively), higher levels of total bilirubin ($p<0.001$), gamma glutamyl transferase ($p<0.001$) and alkaline phosphatase ($p=0.002$) and lowers levels of phosphorus ($p=0.009$). Thirty-one patients were treated with 6000IU of cholecalciferol per day for 60 days or more. Only 29% of them achieved normal levels of 25(OH)D. Patients that responded to treatment had lower Child-Pugh score ($p=0.001$), lower level of total bilirubin at the moment of the second 25(OH)D dosage ($p=0.001$) and higher level of phosphorus ($p=0.003$).

Conclusion: Vitamin D deficiency in children with chronic liver disease is related to the severity of the liver disease and cholestasis. The treatment response rate is low. Normalization of 25(OH)D levels is associated with cholestasis improvement.

Keywords: Cholestasis, liver cirrhosis, vitamin D deficiency, metabolic bone diseases
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O-17 Are macroeconomic and health expenditure indicators correlated with the capacity for liver transplantation in Latin American Countries? THE ALEH Special Interest Group, international Survey 2020

Rodrigo Zapata[1], Graciela Castro[2], Josefina Pages[3], Fernando Cairo[4], Oscar Imventarza[5], Alejandra Villamil[6], Paulo Bittencourt[7], Leonardo Schiavon[8], J.R. Alfeu de Medeiros Fleck[9], Ricardo Villarroel[10], Oscar Varas[11], Juan Carlos Restrepo[12], Adriana Varon[13], Daniela Hernandez[14], Pablo Coste[15], Marcia Samada[16], Antonio Enamorado[17], Chong Ricardo[18], Byron Abad[19], Alvaro Urzúa[20], Rodrigo Wolff[21], Mario Uribe[22], Regina Ligorrea[23], Edgard Aguilera[24], Eira Cerda[25], Sergio Lopez[26], Marcos Girala[27], Martin Padilla[28], Marlene Perez[29], Victoria Mainardi[30], Solange Gerona[31]

[1] *Coordinator, ALEH Liver Transplant Sig. Unidad de Transplante, Clinica Alemana / Facultad de Medicina, Universidad del Desarrollo, Santiago, Chile*
[2] *Co-coordinator, ALEH Liver Transplant Sig. Instituto Nacional de Ciencias Medicas y Nutrición Salvador Zubiran y Hospital Medica Sur, Ciudad de Mexico, Mexico*
[3] *Liver Transplant Unit, Hospital Universitario Austral, Universidad de Buenos Aires, Buenos Aires, Argentina*
[4] *Liver Transplant Unit, Hospital el Cruce, Hospital Britanico, Buenos Aires, Argentina*
[5] *Liver Transplant Unit, Hospital Argerich, Hospital Garrahan, Stalyc Representative, Buenos Aires, Argentina*
[6] *Liver Transplant Unit, Hospital Italiano de Buenos Aires, Argentina*
[7] *Liver Unit, Hospital Portugues de Salvador, Bahi, Brazil*
[8] *Universidad Federal de Santa Catarin, Florianopolis, Santa Catarina, Brazil*
[9] *Liver Transplant Unit, Hospital Moinhos de Vento, Irmandade de Santa Casa de Misericordia de Porto Alegre, Porto Alegre, Brazil*
[10] *Hospital San Juan de Dios, Santa Cruz de la Sierra, Bolivia*
[11] *Centro de Enfermedades Digestivas Varas Castrillo, Tarija, Bolivia*
[12] *Liver Transplant Unit, Hospital Pablo Tobon Uribe, Medellin, Colombia*
[13] *Liver Unit, Fundación Cardioinfantil, Bogota, Colombia*
[14] *Hospital Mexico, La Oruca, San Jose, Costa Rica*
[15] *Hospital Rafael Angel Calderon Guardia, San Jose, Costa Rica*
[16] *Centro de Investigaciones Medico-Quirurgicas, La Habana, Cuba*
[17] *Programa de Trasplantes, La Habana, Cuba*
[18] *Liver Transplant Unit, Hospital de Especialidades Carlos Andrade Marin, Quito, Ecuador*
[19] *Transplant Coordinator, Hospital de Especialidades Arlos Andrade Marin, Quito, Ecuador*
[20] *Liver Transplant Unit, Hospital Clinico, Universidad de Chile y Clinica Santa Maria, Santiago, Chile*
[21] *Liver Transplant Unit, P. Universidad Catolica de Chile, Santiago, Chile*
[22] *Liver Transplant Unit, Hospital Salvador, Hospital Calvo Mackena y Clinica Las Condes, Stalyc Representative, Santiago, Chile*
[23] *Hospital San Juan de Dios, Ciudad de Guatemala, Guatemala*
[24] *Hospital Clinica Viera, Tegucigalpa, Honduras*
[25] *Unidad de Trasplante Hepatico, Hospital Central Militar, Ciudad de Mexico, Mexico*
[26] *Hospital Escuale Dr. Roberto Calderon, Managua, Nicaragua*
[27] *Universidad Nacional de Asunción, Asuncion, Paraguay*
[28] *Department of Transplantation, Hospital Nacional Guillermo Almenara y Universidad Nacional Mayor de San Marcos, Lima, Perú*
[29] *Liver Transplant Unit, Hospital General de la Plaza de la Salud, Santo Domingo, Republica Dominicana*
[30] *Liver Transplant Unit, Hospital Central de las Fuerzas Armadas, Montevideo, Uruguay*
[31] *Liver Transplant Unit, Hospital de Clinicas y Hospital Central de las Fuerzas Armadas, Montevideo, Uruguay*

Introduction: Latin America (LA), is a geographical region with 20 countries homing 652 million people (10% world population), with a huge cultural, economic and developmental diversity. The ALEH (Asociación Latinamericana para el Estudio del Hígado) has driven the formation of special interest groups (SIGs) to enhance the collaboration of health care professionals with common specialized interests in the field of hepatology. The gross domestic product (GDP) is a monetary measure of the market value of all the final goods and