Most Common Complications in Patients Post Liver Transplantation at a Hospital in Mexico.

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Introduction and Objectives: Liver transplantation worldwide presents a series of complications that need to be identified to adequately treat and prevent them; however, information about these in Mexico is limited. The objective is to report the epidemiology of these complications in a third-level hospital transplant center in Mexico

Materials and Patients: A cohort study was conducted, including post-liver transplant patients from 2019 to 2023. The presence of infectious and postsurgical complications after the event was determined, as well as the rate of both acute and chronic rejection. Data are expressed using descriptive statistics with proportions and percentages for qualitative variables and mean and standard deviation or median and range for quantitative variables.

Results: 110 patients were included, 46 women and 64 men with a mean age of [insert average age]. Complications were classified according to type and timing of presentation after surgery. Regarding rejection rates, a 10.00% acute rejection was observed with a mean presentation of 7.6±6.6 months, and 2.8% chronic rejection (mean time: 17.7±8.1 months). Results are summarized in Table 1 and Figure 1.

Conclusions: Complications in liver transplant recipients are common and jeopardize both patient life and graft function. Although rejection rates remain high, our center presents a favorable epidemiology compared to reported literature, below global rates for acute rejection (15-25%) and chronic rejection (3-17%).

Ethical statement: The research was conducted following the Helsinki Declaration of the World Assembly 2013.

Declaration of interests: None.

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Table 1
Postoperative, Early, and Late Complications Following Liver Transplantation

	Post operative		Early		Late	
Liver Rejection	n	Average	n	Average	n	Average
Acute Rejection	0	0	6	5.454545455	5	4.545454545
Chronic Rejection	0	0	0	0	3	2.727272727
Infections	**n**	**Average**	**n**	**Average**	**n**	**Average**
Pneumonia	0	0	17	15.45454545	0	0
Infectious Diarrhea	0	0	14	12.72727273	0	0
Urinary Tract Infection (UTI)	1	0.90909091	9	8.181818182	0	0
Spontaneous Bacterial Peritonitis (PBE)	0	0	1	0.909090909	0	0
Upper Respiratory Tract Infection (URTI)	0	0	5	4.545454545	0	0
Cytomegalovirus (CMV)	0	0	4	3.636363636	0	0
Cholangitis	0	0	3	2.727272727	1	0.909090909
Abdominal Abscess	0	0	3	2.727272727	0	0
Oropharyngeal/Esophageal Candidiasis	0	0	3	2.727272727	0	0
Soft Tissue Infection	0	0	1	0.909090909	0	0
Osteomyelitis	0	0	1	0.909090909	0	0
Bacteremia	0	0	1	0.909090909	0	0
Postsurgical Complications	**n**	**Average**	**n**	**Average**	**n**	**Average**
Biliary Stricture	0	0	5	4.545454545	2	1.818181818
Hemothorax	1	0.90909091	0	0	0	0
Pneumothorax	1	0.90909091	0	0	0	0
Abdominal Wall Hematoma	1	0.90909091	0	0	0	0
Retroperitoneal Hematoma	1	0.90909091	0	0	0	0
Hemoperitoneum	2	1.81818182	0	0	0	0
Cavo-Suprahepatic Stenosis	0	0	0	0	1	0.909090909
Abdominal Adhesions	1	0.90909091	0	0	0	0
Miscellaneous	**n**	**Average**	**n**	**Average**	**n**	**Average**
Non-inflammatory Diarrhea	2	1.81818182	7	6.363636364	11	10
Acute Kidney Injury (AKI)	11	10	13	11.81818182	11	10
Chronic Kidney Disease (CKD)	0	0	8	7.272727273	5	4.545454545
De novo Primary Biliary Cholangitis	0	0	0	0	1	0.909090909
Portal Vein Thrombosis	0	0	1	0.909090909	0	0
Pleural Effusion	2	1.81818182	2	1.818181818	0	0
Seizures	4	3.63636364	1	0.909090909	0	0
Cancer Relapse	0	0	0	0	1	0.909090909
Non-variceal Upper Gastrointestinal Bleeding	0	0	1	0.909090909	0	0
Anal Fistula	0	0	0	0	1	0.909090909
Pathological Fractures	0	0	2	1.818181818	0	0
Lymphoid Hyperplasia	0	0	1	0.909090909	0	0
Unstable Angina	1	0.90909091	0	0	0	0
Superficial Venous System Thrombosis	0	0	0	0	1	0.909090909

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Peripheral cellular immune alterations during excessive alcohol consumption

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Introduction and Objectives: The mechanisms that participate in the pathophysiology of chronic alcohol consumption and Alcoholic Liver Disease (ALD) include alterations of the innate and adaptive immune system, until now there is little information about the damage inducing mechanisms and their participation in the development of the disease. The objective was to determine the imbalance of peripheral cellular immunity according to the pattern of alcohol consumption.

Materials and Patients: Cross-sectional study included 5 groups of subjects with different patterns of alcohol consumption using AUDIT and DSM-IV. G1: Control with OH consumption<10g/day (CT); G2: Risk (Ri) and G3: Abuse (A) with AUDIT>8; G4: Alcoholism, without clinical or biochemical stigmata of damage (OH); G5: Patients with alcoholic liver cirrhosis (CiOH). T cells, T-CD4+, T-CD8+, B cells, NK and NKT were determined in peripheral blood by flow cytometry. For statistical analysis we performed U-Mann Whitney, considering $p<0.05$ significant.

Results: In the study, 589 subjects were included, average age 32±11, 30±11, 23±3, 31.5±13 and 47.5±7.7 years CT, Ri, A, OH y CiOH respectively ($p<0.001$). Alcohol consumption (g/day) was higher in OH 158(210,107), and CiOH 293(340,246) ($p<0.001$,both). Cellular determination of NK we found elevated (15.4 and 13.3vs11.1) and NKT (3.7 and 2.5vs1.7) in groups A, OH and CiOH ($p<0.001$), ($p<0.001$), ($p<0.05$) only in NK, during CiOH NKT decrease (1.4vs1.7)($p<0.001$). In T cells we observed a decrease in OH (62.3vs66.5) and CiOH (56.8vs66.5) ($p<0.001$), the percentage of CD4 + cells decreased from the Ri group (35.7vs38.8)($p<0.01$) until OH

(35.1vs38.8)(p<0.01) while during CiOH they increase (41.8vs35.1) (p<0.05). CD8+ cells increase during OH (24.5vs21.1)(p<0.05) and decrease in CiOH (13.9vs21.1)(p<0.001) respectively.

Conclusions: The immune abnormalities presented during risky consumption, abuse, dependence and cirrhosis due to alcohol are differential, the most significant changes are observed in the cytotoxic NK, NKT and CD8+ and regulatory CD4+ populations generating a cellular imbalance that could be related to development and progression of liver damage.

Ethical statement: The protocol was approved by the Ethics and Research Committees of the "Dr. Eduardo Liceaga" General Hospital of México (HG/DI/16/107/03/082) and the School of Medicine of UNAM (FMD/DI/15/2015)

Declaration of interest: None.

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Biliary reconstruction with biodegradable stent in pediatric liver transplantation: long-term follow-up.

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Introduction and Objectives: The biliary complications can limit the survival of both the graft and the patient in the liver transplant (LT). Biliary strictures represent 80% of cases, could appear early; <6 months or late >6 months post-transplant. To present our experience in the use of the biodegradable stent for biliary reconstruction in LT

Materials and Patients: Prospective, non-randomized study, in patients undergoing liver transplantation from a living donor period from February 2023 to 2024 with the use of a biodegradable stent, the biochemical variables of liver function, as well as radio imaging studies will be recorded to evaluate the presence or no biliary complications during the study. The characteristics of the stend were standardized based on the weight and measurements of the patient and native bile duct.

Results: 6 patients met the requirements to be included in the study, 6 stent placements were performed in 6 transplants, all of them were female, the diagnosis prior to transplantation were biliary atresia (BA) 2, hepatoblastoma 2, and acute liver failure (ALF) 2, with a median age of 22.5 months SD +13.2 months and a median of weight 10.7 kg SD +3.8 kg. (image 1). In 4 patients, left bilio-hepatic anastomosis was performed and in two patients, left hepatic anastomosis was performed toward roux. The degradation was demonstrable with a median of 5.3 months with SD 1.2 after placement. Follow-up was carried out for an average of 9.3 months with a minimum of 4 months and a maximum of 14 months. At the time of the study, all patients show adequate tolerance with no evidence of post-transplant biliary complications requiring biliary exploration or reconstruction. (image 2).

Conclusions: The anatomical characteristics of the stend prevent obstruction or stenosis at the level of the biliary anastomosis, corroborated by imaging studies, laboratory results and clinical evolution throughout the follow-up of our study. We present the first world report with long-term follow-up with the use of a biodegradable device in pediatric patients with an open approach in living donor.

Ethical statement: This study completes the ethical statuses established by our hospital ethics committee.

Declaration of interests: None.

Funding: This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors..

1.- Follow up of biodegrable stend in six patients with liver transplantation

Age at time of transplant *	Weight at time of transplant **	Reason for transplant	Follow up until now *	Presence of the stend on X-ray *	Dilation of the bile duct in US
16 m	9 kg	BA	14 m	6 m	no
21 m	10.9 kg	Hepatoblastoma	14 m	6 m	no
24 m	10.5 kg	Hepatoblastoma	12 m	6 m	no
19 m	7.5 kg	BA	7 m	6 m	no
52 m	15.5 kg	ALF	5m	5 m	no
32 m	17.5 kg	ALF	4 m	2 m	no

* months ** kilograms BA biliary atresia ALF acute liver failure

2.- Demonstration of open approach and follow -up

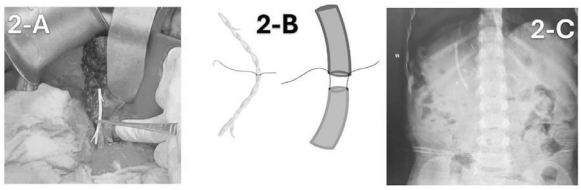

Image A we show the interposition of a stend already placed with left hepatic anastomosis towards the native common bile duct in an open approach during live donor liver transplantation. **Image B** shows part of the open technique placing fixation points with PDS 6 wall suture posterior suture stitches and subsequently fixation of the stend using an internal knot with closure of the anterior wall with separate stitches. **Image C** shows radiological follow-up with the presence of the stend.

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Lymphopenia as a risk factor for mortality in patients with liver cirrhosis.

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Introduction and Objectives: Patients with cirrhosis develop immune dysfunction where a decrease in CD4 lymphocytes has been described in up to 65% of patients. The aim of this study is to evaluate if lymphopenia is a risk factor for mortality in patients with liver cirrhosis during hospitalization

Materials and Patients: A retrospective, observational, cross-sectional, and single-center study was carried out in a period from October 2023 to May 2024, which included patients >18 years of age with diagnosis of liver cirrhosis who were admitted to the Gastroenterology service due to some acute decompensation and who died in that hospitalization, who had absolute lymphocyte determination on admission. Descriptive statistics were performed with frequencies and percentages and the variables were analyzed according to their free or normal distribution with Mann-Whitney U or Student's t,