



The Evolution of the Role of Liver Transplantation in Treating Alcoholic Cirrhosis in Greece

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ABSTRACT

Background. Liver transplantation represents the main treatment for alcoholic cirrhosis. The goal of this article is to review the results of liver transplantation for alcoholic cirrhosis in Greece over the last 2 decades.

Methods. Among 247 patients who underwent liver transplantation between 1991 and 2007, 34 (13.7%) experienced alcoholic cirrhosis as the primary diagnosis. We reviewed their demographic data, stage of liver disease, and outcomes regarding survival via a Kaplan-Meier curve. Also we analyzed the causes of death and the postoperative complications.

Results. Mean Model for End-Stage Liver Disease (MELD) score was 18.4. Other diagnoses included hepatitis C virus (HCV; 23.5%), hepatitis B virus (HBV; 14.7%), and hepatocellular carcinoma (8.8%). Eleven patients died the most frequent causes being primary graft nonfunction (n = 3), hepatic artery thrombosis (n = 2), sepsis (n = 2), and portal vein thrombosis (n = 2). Complications included rejection (32.4%), infection (26.5%), hepatic graft dysfunction (11.8%), and recurrent HCV, recurrent HBV, and renal failure (8.8% each). Recurrence of alcoholism was observed in 3 patients (8.8%) with mild effects on liver function tests. There has been a significant increase in the number of liver transplantations for alcoholic cirrhosis in the last 6 years, namely 25 patients versus 9 in the previous 10 years.

Conclusions. We observed a significant increase in the frequency of alcoholic cirrhosis leading to liver transplantation in the last several years in Greece.

ALCOHOLIC liver disease is a well-documented cause of cirrhosis and one of the most frequent reasons leading to liver transplantation.^{1,2} In Greece there is a combination of high consumption of alcohol and absence of significant restrictions on its use. Despite this, the reported incidence of alcoholism was relatively low in the 1980s, possibly due to the traditional integration of alcohol use in social ritualistic structures.^{3,4} Our goal was to review the experience with liver transplantation for alcoholic liver disease at a liver transplant unit in Greece to identify potential emerging trends.

PATIENTS AND METHODS

Among 247 patients who underwent liver transplantation between 1991 and 2007, 34 (13.7%) experienced alcoholic cirrhosis as a primary diagnosis. We reviewed demographic data stage of liver

disease, and results regarding survival as presented using a Kaplan-Meier curve. Also, we analyzed the causes of death and postoperative complications. All patients were males with a mean age of 51.8 years. The immunosuppressive regimen consisted primarily of prednisone, mycophenolate, and cyclosporine, with the exception of 3 patients who, in addition, were induced with simulect.

RESULTS

Etiology and Staging of Liver Disease

All 34 patients had a primary diagnosis of alcoholic liver disease. In addition to that, 8 patients (23.5%) had hepatitis

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C, 5 patients (14.7%) had hepatitis B, 3 patients (8.8%) had hepatocellular carcinoma, and 1 patient had an incidental cholangiocarcinoma. Regarding the staging, the majority had showed advanced disease by the Child-Pugh score: 28 patients were stage C; 5 patients were stage B; and 1 was stage A. The mean Model for End-Stage Liver Disease (MELD) score of the group was 18.4.

Complications and Survival

Among the 34 patients, 11 died (32.5%). The Kaplan-Meier survival curve (Fig 1) reveals 1- and 3-year survival rates of 70% and 35%, respectively. The various causes of death are shown in Table 1; primary graft nonfunction was the most prevalent one. Other causes of death included hepatic artery thrombosis and sepsis. Postoperative complications are presented in Table 1; the most frequent one was acute cellular rejection, which occurred in 11 patients. All episodes were successfully treated with steroids without any incidence of resistance or long-term effects. Infections were also quite prevalent ($n = 9$), as well as primary graft dysfunction ($n = 4$). The latter was accompanied by an element of cholestasis, which eventually resolved in all cases. Evaluating the small cohort of patients with alcoholic liver disease and hepatitis C (HCV), the rate of HCV recurrence was quite small with only 2 of these 8 patients demonstrating biopsy-proven recurrence. Finally, there were 3 patients with biliary complications, including 1 leak (treated operatively with conversion to Roux-en-Y) and 2 with biliary obstruction at the level of the anastomosis, 1 of which was treated successfully with endoscopic retrograde cholangio pancreatography (ERCP) and the other with conversion to Roux-en-Y.

Trends

Recidivism was identified in 3 patients (8.8%) by temporary small elevations of liver transaminase values. This was a

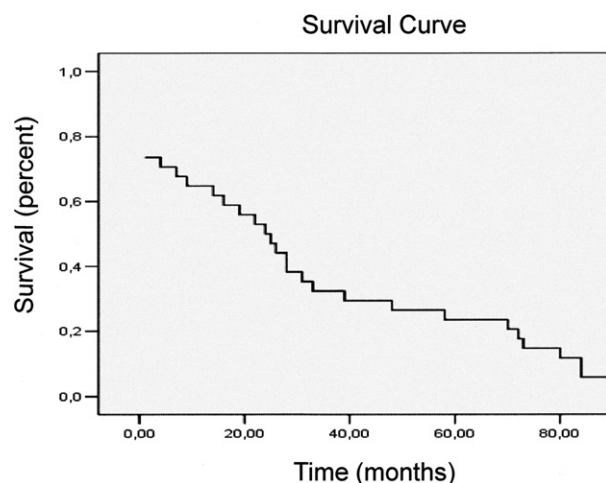


Fig 1. Survival following orthotopic liver transplantation for alcoholic liver disease.

Table 1. Causes of Death and Postoperative Complications Following Liver Transplantation for Alcoholic Liver Disease

Cause of Death		Complications	
Nonfunction	3	Acute cell rejection	11
Hepatic artery thrombosis	2	Infection	9
Sepsis	2	Dysfunction	4
Portal vein thrombosis	1	HBV recurrence	3
Cardiac	1	Renal failure	3
Unknown	2	Cholestasis	3
		Sepsis	2
		Hepatic artery thrombosis	2
		Biliary	3
		HCV recurrence	2
		Osteoporosis	2
		Pancreatitis	1
		PTLD	1
		HCC metastatic disease	1

Abbreviations: HBV, hepatitis B virus; PTLD, posttransplant lymphoproliferative disorder; HCC, hepatocellular carcinoma.

smaller percentage than the 20%–25% rate of recidivism reported in the literature.^{5,6} Furthermore, an interesting trend was the significant increase in the number of liver transplantations performed for alcoholic liver disease in Greece. Specifically in the last 6 years, 25 patients underwent liver transplantation for alcoholic liver disease, compared with only 9 in the first 10 years of the program.

DISCUSSION

This study attempted to evaluate the evolution of liver transplantation in Greece for the treatment of alcoholic liver disease. The results showed the development of the program from 1991 to current with a significant increase in the number of patients seeking liver transplantation for alcoholic liver disease. This observation raises the question whether there is a more prevalent use and potential abuse of alcohol in Greek society, possibly combined with the successful evolution of liver transplantation in Greece into a durable and effective treatment for alcoholic cirrhosis.

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