

The Journal of Heart and Lung Transplantation

Remarkable long-term survival post–lung transplantation among Canadian patients with cystic fibrosis

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Abstract:

Cystic fibrosis (CF) is an autosomal recessive genetic disease that leads to dysfunction in multiple organ systems, with progressive respiratory failure causing death in approximately 80% of patients.^{1–3} Lung transplantation is a treatment option for certain patients with CF and end-stage lung disease. Although lung transplantation has been shown to improve survival in patients with CF, there are limited data to describe predictors of survival after transplantation.⁴ Investigation into factors that may affect survival of patients with CF before and after lung transplantation is an important endeavor.

<http://www.jhltonline.org/action/showAbstract?pii=S1053-2498%2815%2901281-4&journalCode=HEALUN>

American Journal of Transplantation

Kidney Transplantation Significantly Improves Patient and Graft Survival Irrespective of BMI: A Cohort Study

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DOI: 10.1111/ajt.13363

Keywords: Obesity; registry/registry analysis

Abstract:

Obesity and end-stage renal disease (ESRD) are on the increase worldwide. Kidney transplantation is the treatment of choice for ESRD. However, obesity is considered a contraindication for transplantation. We investigated the effect of BMI on mortality in transplanted and patients remaining on the waiting list in the United Kingdom. We analyzed the UK Renal Registry (RR) and the National Health Service Blood and Transplant (NHSBT) Organ Donation and Transplantation data for patients listed from January 1, 2004 to December 31, 2010, with follow-up until December 31, 2011. Seventeen thousand six hundred eighty-one patients were listed during the study period, with BMI recorded for 13 526 (77%). One- and five-year patient survival was significantly better in all BMI bands (<18.5, 18.5–<25, 25–<30, 30–<35, 35–<40, and 40+kg/m²) in the transplant group when compared to those who remained on the waiting list ($p < 0.0001$). The analyses were repeated excluding live donor transplants and the results were essentially the same. On analyses of patient survival with BMI as a continuous variable or using 5 kg weight bands, there was no cut-off observed in the higher BMI patients where there would be no benefit to transplantation. For transplanted patients (N = 8088), there was no difference in patient or graft survival between the defined BMI bands. Thus, irrespective of BMI, patient survival is improved if transplanted.

<http://onlinelibrary.wiley.com/doi/10.1111/ajt.13363/abstract>

Pediatric Transplantation***Respiratory syncytial virus infections in pediatric transplant recipients: A Canadian Paediatric Surveillance Program study***

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Keywords: respiratory syncytial virus; solid organ transplant; stem cell transplantation; viral infection

Abstract:

The incidence and spectrum of severity of RSV infections in SOT or HSCT recipients is not known. From September 2010 through August 2013, pediatricians were surveyed monthly by the CPSP for SOT or HSCT recipients with RSV infection within two yr post-transplant. There were 24 completed case report forms that fit the inclusion criteria (10 HSCT and 14 SOT recipients). Six of 24 cases (25%) remained outpatients, and 11 (46%) were managed on an inpatient ward, while seven (29%) required intensive care of which five required mechanical ventilation and two died of RSV infection. Ten of 23 cases (43%) were nosocomial with these data not recorded for one case. Many transplant recipients recover uneventfully from RSV infection in the first two yr post-transplant. However, severe disease and death also occur. Larger studies are required to establish risk factors for poor outcomes. Prevention of nosocomial RSV should be a priority in transplant recipients.

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Liver Transplantation

Biliary complications in pediatric liver transplantation: Incidence and management over a decade

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Abstract:

This study analyzed how features of a liver graft and the technique of biliary reconstruction interact to affect biliary complications in pediatric liver transplantation. A retrospective analysis was performed of data collected from 2001 to 2011 in a single high-volume North American pediatric transplant center. The study cohort comprised 173 pediatric recipients, 75 living donor (LD) and 98 deceased donor (DD) recipients. The median follow-up was 70 months. Twenty-nine (16.7%) patients suffered a biliary complication. The majority of leaks (9/12, 75.0%) and the majority of strictures (18/22, 81.8%) were anastomotic. There was no difference in the rate of biliary complications associated with DD (18.4%) and LD (14.7%) grafts ($P = 0.55$). Roux-en-Y (RY) reconstruction was associated with a significantly lower rate of biliary complications compared to duct-to-duct reconstruction (13.3% versus 28.2%, respectively; $P = 0.048$). RY anastomosis was the only significant factor protecting from biliary complications in our population (hazard ratio, 0.30; 95% confidence interval, 0.1-0.85). The leaks were managed primarily by relaparotomy (10/12, 83.3%), and the majority of strictures were managed by percutaneous biliary intervention (14/22, 63.6%). Patients suffering biliary complications had inferior graft survival ($P = 0.04$) at 1, 5, and 10 years compared to patients without biliary complications. Our analysis demonstrates a lower incidence of biliary complications with RY biliary reconstruction, and patients with biliary complications have decreased graft survival. *Liver Transpl* 21:1082-1090, 2015. © 2015 AASLD.

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Liver Transplantation

Declining liver graft quality threatens the future of liver transplantation in the United States

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Abstract:

National liver transplantation (LT) volume has declined since 2006, in part because of worsening donor organ quality. Trends that degrade organ quality are expected to continue over the next 2 decades. We used the United Network for Organ Sharing (UNOS) database to inform a 20-year discrete event simulation estimating LT volume from 2010 to 2030. Data to inform the model were obtained from deceased organ donors between 2000 and 2009. If donor liver utilization practices remain constant, utilization will fall from 78% to 44% by 2030, resulting in 2230 fewer LTs. If transplant centers increase their risk tolerance for marginal grafts, utilization would decrease to 48%. The institution of “opt-out” organ donation policies to increase the donor pool would still result in 1380 to 1866 fewer transplants. Ex vivo perfusion techniques that increase the use of marginal donor livers may stabilize LT volume. Otherwise, the number of LTs in the United States will decrease substantially over the next 15 years. In conclusion, the transplant community will need to accept inferior grafts and potentially worse posttransplant outcomes and/or develop new strategies for increasing organ donation and utilization in order to maintain the number of LTs at the current level. *Liver Transpl* 21:1040-1050, 2015. © 2015 AASLD.

<http://onlinelibrary.wiley.com/doi/10.1002/lt.24160/abstract>

Transplantation

Worse Long-term Patient Survival and Higher Cancer Rates in Liver Transplant Recipients With a History of Smoking

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DOI: 10.1097/TP.0000000000000671

Abstract:

Background: This study is a retrospective review of liver transplant (LT) recipients to determine the impact of tobacco exposure on 10-year survival and de novo cancer (CA) incidence.

Methods: The records of 1275 consecutive LT patients were reviewed (2001 to 2011). Patients were categorized as current, previous, or never smokers (NS) at listing for LT. Additionally, smokers were stratified by pack-years of tobacco exposure. Events included patient death, cardiovascular events, and de novo cancers. Cox regression analysis was used to evaluate survival. A complete cause of death analysis is provided, as well as a detailed tumor registry.

Results: Current (n = 279) and previous smokers (n = 323) were more likely to have hepatocellular carcinoma (HCC) at transplant (25%, 29% vs 18% [NS], P < 0.001), and these 2 groups had higher HCC recurrence rates (21%, 14% vs 11% [NS], P = 0.18). De novo non-HCC CA was higher for current and previous smokers, compared to NS (18%, 16% vs 12% [NS], P = 0.05). Among those with de novo CA (n = 180), the 2 smoking groups were more likely to have non-skin CA (60%, 54% vs 27% [NS], P < 0.001). Patient survival at 10 years was worse for current smokers than the other study groups (55% vs 70%, P < 0.01). These results were largely mirrored with increased tobacco exposure.

Conclusions: The LT outcomes are uniformly worse for patients with a history of smoking, and the risk of negative events increases with increasing tobacco use. Smokers have higher rates of HCC and recurrence, de novo cancer, and worse long-term survival.

Summary statement: This study summarizes the clinical outcomes for 1275 LT patients over 10 years, analyzing the impact of pre transplant recipient tobacco use. There are 47% of patients with a history of smoking. Because of demonstrated higher cancer rates and decreased survival, patients with a significant smoking history should be carefully scrutinized for liver transplantation.

http://journals.lww.com/transplantjournal/Abstract/2015/09000/Worse_Long_term_Patient_Survival_and_Higher_Cancer.20.aspx