Pleural Sepsis Associated with High Mortality in Orthotopic Liver Transplantation Recipients

Erik Holzwanger
University of Massachusetts Medical School

Let us know how access to this document benefits you.

Follow this and additional works at: https://escholarship.umassmed.edu/cts_retreat

Part of the Digestive System Diseases Commons, Gastroenterology Commons, Surgery Commons, and the Translational Medical Research Commons

Repository Citation

Creative Commons License
This work is licensed under a Creative Commons Attribution-Noncommercial-Share Alike 3.0 License.

This material is brought to you by eScholarship@UMMS. It has been accepted for inclusion in UMass Center for Clinical and Translational Science Research Retreat by an authorized administrator of eScholarship@UMMS. For more information, please contact Lisa.Palmer@umassmed.edu.
PLEURAL SEPSIS ASSOCIATED WITH HIGH MORTALITY IN ORTHOTOPIC LIVER TRANSPLANTATION RECEPIENTS

Erik Holzwanger, MD¹, Soumil Patwardhan, MBBS¹, and Sunkaru Touray, MBChB², Daniel B. Knox, MD²
Department of Medicine¹, Department of Pulmonary Allergy & Critical Care Medicine², UMass Memorial Medical Center

Background: Orthotopic liver transplantation (OLT) is currently the only definitive treatment for patients with acute liver failure and end-stage liver cirrhosis. Pulmonary complications are a leading cause of post-operative morbidity and mortality. Post-transplant pleural effusions have been reported in the immediate post-operative period reported in about 32 – 47 % of effusion.

Methods: From a database of 1517 patients who presented at our medical center with pleural effusions from 2010 – 2015, we identified 21 patients who had liver transplants using ICD code 50.59. We performed chart reviews to assess the occurrence of the pleural effusion in relation to their liver transplant and determined the impact this had on survival.

Results: Mean age was 60 years (± 7), 71 % were men, and the mean MELD score was 21 (± 8). There were 5 patients who developed pleural effusions after OLT resulting in an incidence rate of 23.8%. Four out of the 5 patients had a positive pleural fluid culture. The most common isolate was Pseudomonas aeruginosa (3 patients) while the other two had Klebsiella pneumonia and Candida glabarata respectively.

Mortality rate in the 5 year period was 42.9 %; and was higher in patients with sepsis (71 vs. 28.5 %, p= 0.06). In multivariate cox regression analysis, pleural sepsis was the strongest predictor of mortality (HR 9.2 95 % CI 1.2-66, p 0.03).

Conclusions: Pleural effusions are a common post-operative complication in OLT patients with an increased mortality associated with pleural space infections. OLT patients who present with pleural effusions must therefore undergo pleural aspiration with a view to diagnose and treat these infections promptly in order to improve survival. Our study is limited by a small sample size and retrospective design selecting for patients who may have had a higher risk of mortality in the first instance.

Contact:
Erik Holzwanger, MD
PGY2, UMass Memorial Medical Center
erik.holzwanger@umassmemorial.org