Pleural Sepsis Associated with High Mortality in Orthotopic Liver Transplantation Recipients

PLEURAL SEPSIS ASSOCIATED WITH HIGH MORTALITY IN ORTHOTOPIC LIVER TRANSPLANTATION RECIPIENTS

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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.

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