

Fatigue as Reported at 12 Time Points during the First Year Post-Liver Transplant

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BACKGROUND: Although liver transplantation has evolved as an effective procedure, fatigue remains a post-transplant complaint [1]. As yet, there are no published accounts of the experience of fatigue at temporal intervals during the first post-transplant year, and this information would benefit LT candidates in recovery planning. Van Ginneken [2] found that time since transplant was not associated with physical fatigue and reduced activity, but was associated with albumin levels less than 25g/l and with lower GFR.

METHODS: Data used in this study were collected through an ongoing, longitudinal, prospective design. Results presented here are for fatigue and biometric data at 12 data points starting one week post hospital discharge, continued weekly for the first 8 weeks, then monthly at 3, 6, 9, and 12 months.

RESULTS: We sampled 30 subjects: 19 (70.4%) male and 8 (29.6%) female, age 55.4 ± 9.8 years. A mixed models analysis of variance was done to investigate a change in FACIT over time. The initial model included age, MELD, sex, week, albumin, ALT, BILI T, and CREAT. The final model included age, BILI T, and week. Increasing age and BILI T were associated with greater fatigue ($p=0.0376$ and $p=0.0005$, respectively). There was significant decrease in fatigue over time ($p<0.0001$). Pair-wise comparisons were done to determine which weeks significantly differed. Tukey's adjustment for multiple comparisons was used. Figure 1 indicates which visits significantly differed.

DISCUSSION: Our subjects experienced decreased fatigue over time. The data set was rich with prospectively collected longitudinal information helpful for establishing realistic expectations for post-transplant fatigue. Findings include early weeks of recovery (weeks 2-3) differ from weeks 7+ and that there is no significant change after 3 months, up to one year. No association was seen with Albumin levels although total bilirubin and age were associated with greater fatigue.

1. Kalaitzakis, E., et al., Factors Related to Fatigue in Patients with Cirrhosis, Before and After Liver Transplantation. *Clinical Gastroenterology and Hepatology*, 2011.

2. van Ginneken, B.T.J.a., et al., Persistent fatigue in liver transplant recipients: atwo-year follow-up study. *Clinical Transplantation* January/February, 2010. 24(1): p. E10-E16.

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