

Prevalence and risk factors of T-cell mediated rejection in patients after liver transplantation from deceased donors: a retrospective study over 10 years

Svetlana Adamcová-Selčanová¹, Ľubomír Skladaný¹, Tomáš Koller²

¹HEGITO (Division Hepatology, gastroenterology and liver transplantation) of Department Internal medicine II, Faculty of Medicine, Slovak Medical University, FD Roosevelt Hospital, Banská Bystrica, Slovakia

²5th Department Internal Medicine, Comenius University Faculty of Medicine, University Hospital Bratislava Ruzinov, Bratislava, Slovakia

Introduction: T-cell mediated rejection (TCMR) is still one of the most common non-surgical complications following liver transplantation (LTx). **Aims:** To determine the prevalence, risk factors and outcome of TCMR after LTx from deceased donors (DDLTL) in a single center. **Methods:** Retrospective analysis; Study interval: May 2008–December 2017. Inclusion criteria: DDLTL at this TC; exclusion criteria: patients treated with CyA or basiliximab. Recorded variables: demographics, MELD score, Child-Pugh, etiology, CIT (Cold Ischemia Time), BG (blood groups), tacrolimus (TAC) on 5th day post LTx and at discharge, length of hospital stay (LOS), survival. TCMR was defined histologically, liver biopsy was performed only in patients having an increase in liver function tests or unexplained liver dysfunction. **Results:** 193 patients were included, median age was 53.6, 41.3 % were females, median MELD score 16.0; Child-Pugh score 10. TCMR was diagnosed in 21 patients (11.4 %). The comparison between groups (TCMR and no-TCMR) showed the following differences: age: 54.3 vs 42.3 years ($p = 0.073$); etiology of autoimmune hepatitis (AIH) 33.3 vs 6.7 %, ($p = 0.001$), PSC (Primary Sclerosing Cholangitis) 19.0 vs 6.7 %, ($p = 0.13$). We observed no significant differences among other etiologies, CIT and BG. Level of TAC on the 5th day post LTx was 5.90 [4.00-9.30] vs 4.80 [2.60-7.00] ng/ml ($p = 0.097$); TAC at discharge was 9.00 [6.80-11.3] vs 8.9 [7.50-10.6] ng/ml ($p = \text{NS}$); LOS was 35.0 vs 24.5 ($p = 0.001$). We observed no difference in overall survival between the groups. Multivariate analysis identified independently associated factors with TCMR: AIH (OR = 4.76, 95% CI 1.37-16.46; $p = 0.014$), absence of significant ascites before LTx (OR = 3.15; 95% CI 1.11-8.95, $p = 0.024$) and 5th day TAC level (OR = 0.85, 95% CI 0.73-0.997, $p = 0.045$). **Conclusion:** T-cell mediated rejection diagnosed clinically and confirmed histologically occurred in 21 patients (11.4 %). Etiology of AIH, absence of ascites and lower TAC were independent risk factors for TCMR. TCMR had no impact on overall survival.

Key words: deceased donors liver transplantation, diagnosis, outcome, risk factors, T-cell mediated rejection.

Prevalence a rizikové faktory T buňkami zprostředkované rejekce u pacientů po transplantaci jater od zemřelého dárce – retrospektivní studie v desetiletém období

Úvod: T buňkami zprostředkovaná rejekce (TCMR) je stále jednou z nejčastějších nechirurgických komplikací po transplantaci jater (LTx).

Cíl: Určit prevalenci, rizikové faktory a výsledek TCMR po LTx od zemřelého dárce (DDLTL) na jednom pracovišti.

Metodika: Retrospektivní analýza; Interval studie: květen 2008 – prosinec 2017. Kritéria pro zařazení: DDLTL v našem transplantčním centru; Kritéria vylučující zařazení: pacienti léčení CyA nebo basiliximabem. Zaznamenané proměnné: demografické