6. Abstract

Introduction: Sirolimus, a mechanistic target of rapamycin (mTOR) inhibitor, has been used in individual cases as a reserve immunosuppression outside the approval to prevent rejection after liver transplantation. As a further mTOR inhibitor, everolimus was approved 2012 for this indication. The aim of this study was a systematic analysis of clinical and pharmacological data in the context of a conversion from a sirolimus to an everolimus-based immunosuppression in long-term liver graft recipients.

Methods and Patients: A retrospective, systematic analysis of biochemical and clinical data before and after the conversion in 16 patients (men / women, 8/8) after liver transplantation, with a conversion of the immunosuppression from sirolimus to everolimus with special scientific interest on transplant function, renal function and metabolic comorbidities were performed. The statistical analysis was conducted by Friedman test and post-hoc analysis.

Results: Patients were converted from sirolimus to everolimus in the median (minimum-maximum) 10.1 (4-22.3) years thereafter liver transplantation. After the conversion, the majority of patients did not need an adjustment of their dose. No transplant rejection or clinically relevant complications were observed during the observation period. In addition, no significant differences in renal function, diabetes mellitus or arterial blood pressure were seen before and after conversion. The serum bilirubin concentration was lower after commutation to everolimus, whereas AST, ALT and triglyceride serum concentrations were significantly higher.

Conclusions: This study represents the first systematic analysis of the conversion from a sirolimus to an everolimus-based immunosuppression in long-term liver graft recipients. Relevant complications including rejections were not observed.