

PREVALENCE AND SIGNIFICANCE OF ANTI-HLA ANTIBODIES AFTER LIVER TRANSPLANTATION

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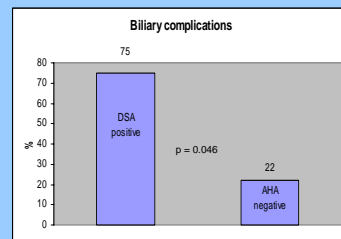
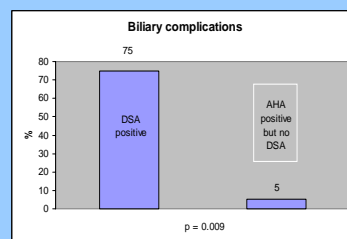
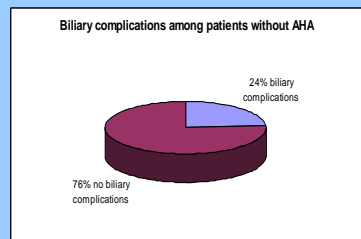
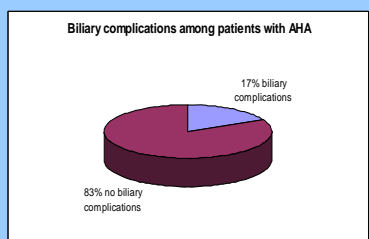
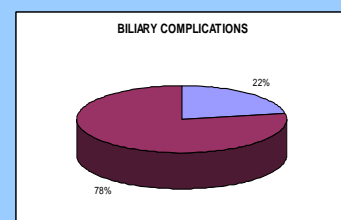
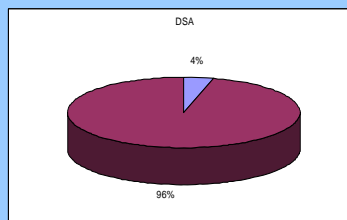
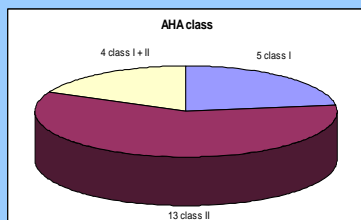
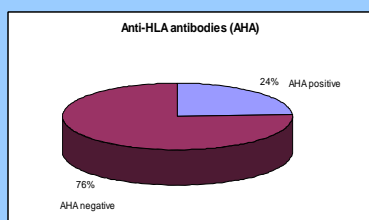
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Objectives: The pathogenic role of anti-HLA antibodies (AHA) after kidney transplantation is well established (1-3). However, its significance after liver transplantation remains unclear. The aim of our study was to determine the prevalence and significance of AHA after liver transplantation.

Methods: Between January 2007 and November 2007, all liver transplant recipients, who were greater than 6 months post-transplantation and followed regularly at our transplant outpatient clinic (n = 95) were screened for AHA. All clinical and electronic records were reviewed. Serum samples were tested using multiplex technology (Luminex). A liver biopsy had been performed in 55 out of the 95 patients based on clinical grounds but no routine protocol biopsies were performed. Immunosuppression was calcineurin inhibitor-based in 90 patients, sirolimus-based in 4 patients and one patient had no anti-rejection therapy (operationally tolerant recipient).

Results: The mean time from transplantation to study was 85 months (range 6 – 248 months). Overall, AHA were found in 23/95 (24.2%) of patients (9 had anti-class I alone, 14 anti-class II alone, and 4 had both anti-class I and II). However, only 4/95 patients (4.2%) had donor-specific antibodies (DSA) (one anti-class I and 3 anti-class II). Twenty-one out of 95 patients (22.1%) had a history of past or current biopsy-proven or radiological biliary complications (chronic rejection, ischemic cholangitis, ischemic type biliary lesions or biliary anastomosis stricture). Among patients with AHA, 4/23 (17.4%) had biliary complications, while it was 17/72 (23.6%) in patients without AHA (NS). Among patients with DSA, 3/4 (75%) had biliary complications (two with biopsy-proven chronic rejection in association with biliary strictures and one with ischemic cholangitis following hepatic artery thrombosis), versus 1/19 (5.3%) patients with AHA but no DSA (p=0.009), versus 16/72 (22.2%) patients without AHA (p=0.046). In patients with DSA, immunosuppression was not different than in patients without DSA.



Conclusions: We found a 24% AHA prevalence. The presence of DSA, but not of AHA, was significantly associated with an increased incidence of biliary complications including chronic liver allograft rejection. The exact mechanisms and possible causal relationship linking DSA to biliary complications remain to be studied. Larger prospective trials are thus needed to further define the role of AHA and in particular of DSA after liver transplantation.

Bibliography:

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- 3) Terasaki PI, Ozawa M, Castro R. Four-year follow-up of a prospective trial of HLA and MICA antibodies on kidney graft survival. *American Journal of Transplantation* 2007; 7: 408-15.