LATE GRAFT IRON ACCUMULATION IN PATIENTS TRANSPLANTED FOR ALCOHOL-RELATED CIRRHOSIS IS ASSOCIATED WITH EXPLANT IRON OVERLOAD

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Introduction Iron accumulation can occur in individuals who drink alcohol to excess, and iron overload has been reported in up to 50% of alcohol-related cirrhosis (Mueller and Rausch, 2014). Hepcidin is a key peptide regulator for iron homeostasis; alcohol is thought to act within hepatocytes and suppress hepcidin production with consequent increased iron absorption from the intestine (Harrison-Findik et al., 2009). Having anecdotaly noted that patients transplanted for alcohol-related cirrhosis accumulate iron post-transplant, we analysed this with respect to liver iron loading pre-transplant to gain some insight into potential mechanisms.

Methods Retrospective analysis of 223 patients transplanted for alcohol-related cirrhosis since January 2010 identified 47 patients with no iron in their time zero biopsy (immediately post-transplant) who had a liver biopsy at least 12 months post-transplantation. This cohort of 47 patients was then further analysed considering explant iron accumulation and grade, late graft iron accumulation (>1 year post-transplant) and evidence of recidivism.

Results Of the cohort of 47 patients, 20/47 (43%) had a degree of iron (mean grade 2) in their explant livers. Regarding late graft biopsies, 7/47 patients (15%) had evidence of iron loading (mean grade 1) in their graft at least a year post-transplantation. Of these 7 patients, 6/7 (86%) also had iron accumulation in their explant livers. 3/7 of the patients with late graft iron demonstrated recidivism post-transplant with only one of the patients with no evidence of explant iron accumulation developing recurrence (severe steatohepatitis) on late graft biopsy. Of note, HFE mutations were not present in any of the 7 donors.

Although numbers are small, these results are statistically significant with a Chi-squared test rejecting the null hypothesis that explant iron and late graft iron accumulation are independent of each other (p = 0.012), indicating that there is an association between the two groups.

Conclusion Iron accumulation in end-stage alcohol-related liver disease is common, and is comparative in our cohort (43%) with published figures (up to 50%). Based on our results, late graft iron accumulation is statistically associated with explant iron loading. This association does not seem to be related to recidivism or disease recurrence, and is not due to donor HFE mutations; in our experience liver donors with HFE mutations have iron at baseline.

These results may imply extra-hepatic and/or non-alcohol related stimuli post-transplantation which may or may not affect hepcidin expression causing iron overload. Future study of serum hepcidin concentrations in this context is merited.

CARVEDILOL VERSUS ENDOSCOPIC BAND LIGATION FOR SECONDARY PROPHYLAXIS OF VARICEAL BLEEDING – LONG TERM FOLLOW-UP OF A MULTICENTRE RANDOMISED CONTROLLED STUDY

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Introduction Carvedilol reduces rates of variceal bleeding and rebleeding by lowering portal pressure. However, an associated pleotropic survival benefit has been proposed.