P94 PREVALENCE AND CLINICAL SIGNIFICANCE OF HEPARIN INDUCED THROMBOCYTOPAENIA IN PATIENTS TRANSPLANTED FOR BUDD CHIARI SYNDROME

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R Westbrook, D Orr, N Heaton, J Wendon, W Bernal, G Auzinger, J O'Grady, R Patel, A Paglucia, R Arya, G Mufti, M Heneghan. *King's College Hospital, London, UK*

Introduction Budd Chiari Syndrome (BCS) is associated with an underlying pro-coagulant haematological disorder in up to 87% of cases. Following liver transplantation (LT), anticoagulation with heparin is commonplace in order to prevent thrombotic complications. Heparin induced thrombocytopaenia (HIT) is a rare but life threatening complication of heparin therapy, where the thrombotic risk is 30 times that of control populations. HIT associated thrombosis has a reported incidence of between 0.5 and 3% in patients on un-fractionated heparin. We reviewed all our patients with BCS who underwent LT to assess the incidence and clinical significance of HIT.

Results In total, 36 patients underwent LT for BCS between 1995 and 2008. An underlying pro-coagulant disorder was identified in 22 patients (myeloproliferative disorder (MPD) n=17, Protein C Deficiency n=2, Behcet's n=2 and lupus anti-coagulant n=1). One third of patients were thrombocytopenic (platelets <150 cells/μl) prior to LT. All patients had received un-fractionated heparin prior to and following LT. Thrombocytopaenia occurred in 85% of patients within the first 10 post operative days (median 49 cells/μl, range 7–292 cells/μl). A diagnosis of HIT was made when patients had a platelet count of <150 cells/μl and circulating PF4-heparin antibodies were identified. The overall incidence of HIT was 22% (8/36 patients), however in patients with a MPD the incidence was 41% (7/17). Furthermore a MPD was present in 7/8 (88%) patients who developed HIT vs 10/28 (36%) patients who did not develop HIT (p=0.016). An acute post operative thrombotic complication occurred in 50% (4/8) of patients who developed HIT compared to 4% (1/28) of patients that didn't (p=0.005). Bleeding complications occurred in 38% (3/8) of patients that developed HIT compared to 14% (4/28) who didn't (p=0.16). In hospital mortality was 38% in those patients that developed HIT compared to 7% in those who did not develop HIT (p=0.06). The fall in platelet count was not statistically different between those patients who did and did not develop HIT. In a cohort of patients (n=30) transplanted for hepatic artery thrombosis, who had also received un-fractionated heparin pre and post LT, HIT occurred in 1/30 (3%).

Conclusion We have demonstrated that HIT is a common complication of patients treated with un-fractionated heparin following LT for BCS. Moreover, the presence of an underlying MPD is a strong predisposing factor for its development. In patients that develop HIT the thrombosis rate, bleeding complication rate and pre-hospital discharge mortality are all increased. The diagnosis requires a high index of suspicion due to the frequency of thrombocytopaenia following LT. Due to the exceptionally high incidence of HIT in patients with MPD, these patients may benefit from standardised treatment with lepirudin following LT.

P95 OUTCOMES OF PREGNANCY FOLLOWING LIVER TRANSPLANTATION

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R Westbrook, A Yeoman, K Agarwal, V Aluvihare, J O'Grady, N Heaton, M Heneghan. *King's College Hospital, London, UK*

Introduction Pregnancy in liver transplant (LT) patients has been reported to have largely favourable outcomes for the mother, foetus and allograft. Concerns remain with regards to graft rejection, the type and optimal level of immunosuppression and the ideal timing for conception following LT. We report a review of all pregnancies in LT recipients at our centre from 1988 to 2010 concentrating on maternal, foetal and graft outcomes.

Results 115 pregnancies occurred in 84 LT recipients. The median age at conception was 26 years and the median interval between LT and conception was 53 months (range 1–239 months). There were 82 (71%) live births, 13 terminations, 18 spontaneous abortions, 1 molar pregnancy and 1 intrauterine death. The mean gestation was 38 weeks (range 24–42 weeks). Regarding foetal outcomes, no congenital abnormalities occurred. A very low birth weight (<1500 g) occurred in 6% (7 babies), and all required neonatal intensive care support following delivery. On follow-up one has delayed developmental milestones. Prematurity (gestation <37 weeks) occurred in 34% 28/82. Neither choice of maternal immunosuppression nor an episode of rejection during pregnancy impacted on the birth weight or gestational period. Maternal complications encountered during pregnancy included renal failure (n=9, 8%), hypertension (n=27, 23%) and pre eclampsia (n=16, 14%). 18 (16%) cases of graft rejection occurred in association with pregnancy. Sixteen were consistent with acute cellular rejection on biopsy; with 5/16 occurring post partum. Overall 15 responded to immunosuppression augmentation and three required methyl prednisolone. The risk of graft rejection was significantly higher in patients conceiving within 12 months of LT (p<0.006). No maternal deaths occurred as a direct result of pregnancy, however two mothers required ITU support and 1 developed decompensated liver disease post partum. Seventy eight patients were on tacrolimus, 35 on cyclosporine, 1 on mycophenolate and 1 on sirolimus. Patients on cyclosporine had a higher incidence of acute rejection (p=0.04) and were more likely to be on a second immunosuppressive agent (p<0.001) or prednisolone (p<0.001) when compared to those patients on tacrolimus. Immunosuppression choice had no significant effect on pregnancy induced hypertension, pre eclampsia or gestational diabetes. The conception on mycophenolate was terminated, however the patient on sirolimus delivered at 37 weeks.

Conclusion Overall pregnancy following LT has a favourable outcome, with the majority of wanted conceptions resulting in a live birth. Immunosupression appears safe with no congenital abnormalities in this cohort. Risks however do remain with regards to acute cellular rejection and very low foetal birth weights. Patients should be educated with regards to the above information so an informed decision regarding pregnancy can be made.

P96 LONGITUDINAL CHANGES IN RENAL FUNCTION IN LIVER TRANSPLANT RECIPIENTS: IMPACT OF ACUTE KIDNEY INJURY AND THE ASSESSMENT OF THE DECLINE IN ESTIMATED GLOMERULAR FILTRATION RATE OVER 5 YEARS POST LIVER TRANSPLANTATION

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A Slack, M McPhail, R Westbrook, N Heaton, M Heneghan, J O'Grady, V Aluvihare, K Agarwal, A Suddle, G Auzinger, W Bernal, C Willars, J Wendon. *Institute of Liver Studies, King's College Hospital, London, UK*

Introduction Orthotopic liver transplantation (OLT) can valuably increase long term survival in patients with cirrhosis. After the immediate transplant period cardiovascular morbidity and mortality become increasingly important and chronic kidney disease (CKD) stage 3 or more has been described as an independent risk factor for cardiovascular adverse events. The effect of acute kidney injury (AKI) on long term mortality and the pattern of renal morbidity post OLT have not been well described.