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BLOODLESS LIVER TRANSPLANTATION: SUCCESSFUL EXPERIENCE IN JEHOVAH WITNESSES

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Background: In liver transplantation (LT), blood product use has been reduced due to better medical and surgical management, but the interest of transfusion-free LT is debated. The authors developed a transfusion-free (no red cell, plasma, or platelets) LT program for Jehovah witnesses (JW), and analysed its outcome to evaluate the potential interest of bloodless strategies in LT for the JW and non-JW LT recipient population.

Methods: Over an 8-year period, 17 selected JW underwent 18 LT, including 5 LRLT and one pediatric LT. We analysed herein the outcome of the 11 adult patients (5 males, 6 females, mean age: 50 years) who underwent 12 cadaveric whole LT. They received erythropoietin (EPO) therapy, with iron and folic acid to increase haematocrit (Ht). A cell saver was used during the surgical procedures. No patient was lost to follow-up (mean: 44 months). Data are presented as mean \pm SEM.

Results: No blood product was used. During the operative procedure a mean of 1,250 ml were scavenged by the cell-saving system, allowing the reinfusion of a mean of 404 ml of concentrated red cells. Due to preparation, Ht level rose from $37.5\pm1.6\%$ at first visit, to $43\pm1.5\%$ just before LT ($p<0.05$). Post-operative day 1 Ht was $35\pm1.6\%$, ($p<0.05$), and further decreased during the post transplant period (lowest Ht: $30.7\pm1.7\%$, $p<0.05$). Ht at discharge was $33.6\pm1.9\%$. One patient needed urgent retransplantation due to early hepatic artery thrombosis. No patient experienced complication linked to anemia. Patient and graft survival is 100% and 90%, respectively.

Conclusions: These results justify the development of bloodless LT program. They raise questions on the interest of a prospective evaluation of bloodless strategies in non-JW patients undergoing LT, and on the possible EPO protective effects against ischemia-reperfusion injury and apoptosis.