DO WE NEED USE FRESH FROZEN PLASMA IN PATIENTS AFTER LIVER TRANSPLANTATION?

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INTRODUCTION.

Patients with end-stage liver disease are assumed to be at high risk of bleeding during and after any kind of invasive intervention (any kind of operation, including transplantation or minimally invasive interventions).

Conventional laboratory tests, such as PT and PT-INR, do not accurately predict thrombotic or bleeding risk in patients with cirrhosis (1).

Optimal coagulation management remains one of the greatest challenges in orthotopic liver transplantation (OLT). Using coagulation tests and thrombelastography (TEG) may be beneficial in determining the optimal coagulation management (2).

AIM OF STUDY.

To estimate the need of fresh frozen plasma (FFP) transfusion in patients after liver transplantation.

METHODS.

After local Ethic Committee approval and informed consent we studied 41 patients with liver cirrhosis, aged 44.0 ± 15.4 (24-60) yo, weight 54.8 ± 7.3 (48-58) kg, MELD score 18.4 ± 3.8 . We studied activated partial prothrombin time (APPT), international normalized ratio (INR), prothrombin time (PT), fibrinogen A (FGA), platelets count (PLT), thrombelastography (K; R; α angle; MA; LY30), plasma volume transfused postoperatively, ICU duration stay.

RESULTS AND DISCUSSION.

There was no bleeding in patients postoperatively. The coagulation tests showed significant decreasing of FGA and PI levels, increasing of INR and APPT through 10 days after liver transplantation; while thromboelastography showed slight hypocoagulation status in patients through 1-4 postoperative days (Figure 1-6).

Figure 1. APPT changes after OLT

Figure 2. PT changes after OLT

Figure 3. INR changes after OLT

Figure 2. FBG changes after OLT

Figure 3. R-interval changes after OLT

Figure 4. K-interval changes after OLT

Figure 5. MA changes after OLT

Figure 6. A DEGREE changes after OLT

FFP transfusion (1200-2500 ml) was performed in 4 patients on day 1 after surgery with severe coagulation impairment in the beginning of our experience. In other 37 cases we used transfusion restricted strategy and used no FFP. Mean volume of FFP transfused postoperatively was 248.5 ± 704 ml. ICU stay duration 16.6 ± 8.4 days.

CONCLUSION.

Despite of TEG and coagulation tests disorders, patients after liver transplantation presented no bleeding do not require FFP transfusion including whole postoperative period.

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