Early heparin prophylaxis reduces venous thrombosis after orthotopic pediatric liver transplantation

Dott. GIOVANNA COLOMBO (1), Dott. MIRCO NACOTI (1), Dott. CINZIA GIACCHERINI (1), Dott. ALBERTO BERZI (1), Dott. ISABELLA PELLICCIOLI (1), Dott. FLORIANA FERRARI (1), Dott. DANIELE BONACINA (1), Dott. ANNA FALANGA (1), Dott. MANUELA CORNO (1), Dott. MICHELE COLLEDAN (1), Dott. EZIO BONANOMI (1)

(1) Asst Papa Giovanni XXIII, P.zza OMS 1, Bergamo, Italia.

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Background. Despite the improvement of surgical techniques and medical care, thrombotic complications still represent the primary cause of early graft failure and re-transplantation within the first 30 days following pediatric liver transplantation (PLT). Standardized approach for prevention is still lacking.

Objectives. Evaluating the effectiveness of early heparin prophylaxis infusion started 24 hours postoperatively at 10 UI/kg per houron reducing venous thrombosis event (VTE) in the first 30 days after PLT.

Methods. Retrospective case-control study designed to compare the incidence of early VTE prior (2002-2010) and after (2011-2016) the introduction of the early heparin prophylaxis in our Institution.

Results. From 2002 to 2016, 479 pediatric patients received LT in our Centre with an overall one year survival of0.9.365 patients were eligible for the statistical analysis: 244 prior to heparin and 121 with heparin.

We report a lower incidence of VTE in the heparin group: 2,5% (3/121) versus 7,9% (19/244 patients) (p = 0.038).

27 variables considered potential risk factors for VTE were studied. After the multivariate analysis, heparin prophylaxis remained the unique factor significantly and independently associated to the early VTE with a HR = 0,22 (0,05 – 0,96), p 0,043.

In terms of 1 year overall survival, no significant differences between the 2 groups were shown, however we report 5 retransplantation prior to heparin versus 1 retransplantation with heparin.

Conclusions. Intravenous unfractionated heparin infusion started 24 hours postoperatively at 10 UI/kg per hour can be considered a valid and safe strategy to prevent VTE after PLT.

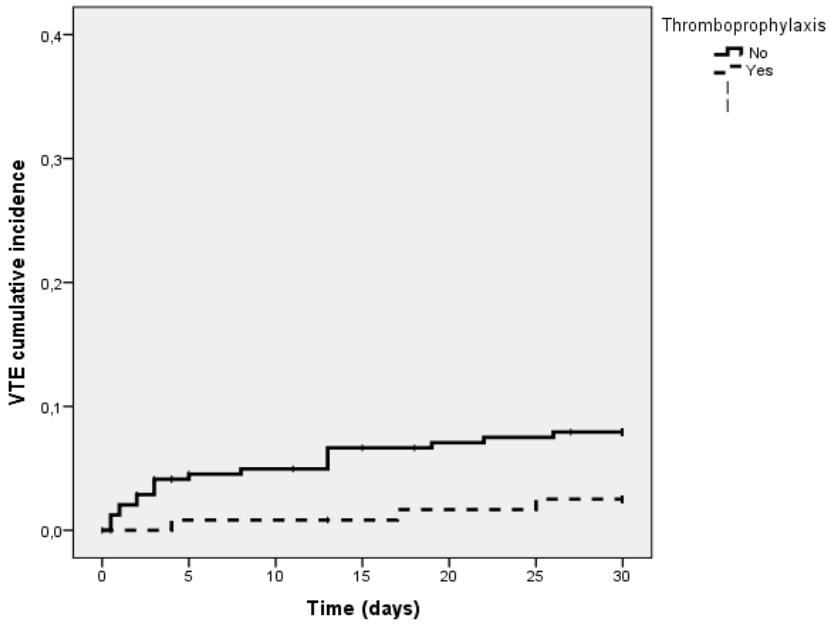

Figure 3. Cumulative incidences of venous thrombotic events according to use of thromboprophylaxis by Kaplan-Meier analysis.