

Hyperglycemia in pediatric liver transplantation.

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Introduction: After liver transplant (LT), hyperglycemia (HG) is a common complication and is associated to an unfavorable prognosis, a persistent diabetes onset and an increased cardiovascular event. However, in pediatric LT, incidence of HG, its occurrence, persistence, and predispositions remain understudied.

Objectives: Therefore, the objectives of our study were the characterization and evolution of hyperglycemia in children with LT and the analysis of their glycemic profile.

Methods: We collected 7-years data about 195 children with LT in Brussels to characterize hyperglycemia and associated risk factors in multivariate analyses, and we followed five children with LT during the most critical moment of HG to analyze their glycemic profile. Hyperglycemia was defined as a glycemia exceeded 200 mg/dL, for at least two measurements separated by 24 hours, outside the day of LT.

Results: Our retrospective study showed that 24% of LT children presented hyperglycemia and its onset was between 0 and 14 days after transplant. Multivariate analysis showed that children with LT who benefited of steroids (OR 2,51) for a graft rejection and/or had a virus infection (OR 2,05) were more at risk to develop hyperglycemia. Glucose sensors showed that HG was present in the post-prandial afternoon for all LT children.

Conclusions: Our study shows that children with LT were more at risk of developing hyperglycemia when they required the use of steroids or when they had a viral infection, and that the measurement of blood glucose during the first month post-transplant and in the post-prandial period is essential to detect glycemic abnormalities.

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