Abstract Type : Oral Presentation
Abstract Submission No. : F-001233

PROFILE OF SERUM TOTAL BILE ACID LEVELS AND THEIR VALUE IN THE EVALUATION OF GRAFT DYSFUNCTION IN LIVE DONOR LIVER TRANSPLANT

Venkatesh Balaraman Sundararajan[1], Senthil Kumar[2], Ragini Kilambi[3], Tushar Kant Chattopadhyay[3]

[1]Department of Transplantation Surgery, Apollo Hospitals, India
[2]Department of Surgery, Ramachandra medical college, India
[3]Department of Surgery, Institute of Liver and Biliary Sciences, India

Introduction: Early allograft dysfunction (EAD) in the immediate post liver transplant period is based on clinical criteria and laboratory values. Acute cellular rejection (ACR) is the prototype of graft dysfunction. The aims of this study were to study the profile of serum total bile acids (STBA) in the early post-transplant period in the live donor liver transplant (LDLT) setting and to explore their value in the diagnostic resolution of EAD especially in relation to ACR in liver recipients.

Methods: Consecutive patients who underwent LDLT form August 2018- December 2019 were studied. Serum total bile acids level was measured preoperatively and from post-operative day 1 to 14. Early allograft dysfunction was defined as per Olthoffs criteria. ACR was defined as doubling of liver enzymes AST/ALT (Transaminitis) from previous in the absence of other causes that responded to steroid pulse or increasing immunosuppression.

Results: Of the 63 patients who underwent LDLT, EGD occurred in 25.4% and ACR in 26.9%. The median baseline serum TBA in cirrhotic patients awaiting liver transplant was 95.1 mol/L (range: 15.5 -578.6 mol/L). The STBA levels decrease to near normal values on POD-1 and continue to plateau till POD-14. The mean value of POD 1 STBA was 30.5 (sd: 56.8) mol/L and on POD-14 was 35.7 (sd:53.8) mol/L. The STBA levels were higher and with increasing trend in those with EAD from POD 3-14. STBAs increase before ACR 24-48 hours before the increase in liver enzymes. The sensitivity and specificity of STBA increase to predict ACR was 94.1% and 61.9% and the area under the curve on ROC is 0.78 (95% CI: 0.653 to 0.877).

Conclusion: STBAs levels were higher and in increasing trend in the first post-operative week in those with EAD. STBAs increase from previous value may help to differentiate between ACR and sepsis.