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## **A case report of Refractory Ascites Induced by Mycophenolate Mofetil in 7-year-old boy with Kidney Transplantation**

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**Case Study: Backgrounds:** Common side effects of Mycophenolate mofetil (MMF) are diarrhea, leukopenia and infectious complication. The polymorphisms of enzymes affecting MMF clearance are related to MMF toxicity and in vitro study revealed that high MMF level caused endothelial dysfunction. Recently, case reports of MMF induced ascites were published in adults. Here we firstly present a case of MMF induced refractory ascites in a child after kidney transplantation (KT).

**Case:** A 7-year-old Korean boy, on peritoneal dialysis due to mesangial proliferative glomerulonephritis, received KT from deceased donor. MMF, tacrolimus, methylprednisolone was started after KT. Immediate post operatively, oliguria developed. Under the possibility of hyper-acute graft rejection and nephrotic syndrome relapse, therapeutic plasmapheresis and continuous renal replacement therapy was initiated and renal function recovered within 4days. However, ascites was aggravated, and not regulated by diuretic. The laboratory results were as follows; Prothrombin time 1.15 INR, albumin 4.2g/dL, total bilirubin 0.2mg/dL, AST/ALT 10/5 U/L, BUN/Cr 52.1/0.82 (mg/dL), spot urine protein/creatinine ratio (PCR) 10.94mg/mgCr. Diagnostic paracentesis revealed a protein contents of 1.38g/dL with a serum-ascites albumin gradient >1.1g/dL, which can be interpreted as an uncomplicated ascites in liver cirrhosis. However, the patients had no liver dysfunction and abdominal ultrasonography showed only increased liver parenchymal echoes without cirrhosis. Echocardiography was normal. No medication had reported side effect of ascites except a case report of MMF induced refractory ascites. Five month after KT, MMF was switched to azathioprine and ascites resolved completely. Six-month later, the patient was still ascites resolved state. The *UGT2B7* 802 polymorphism, affecting MMF pharmacokinetic, is tested in this patient and wild-type *UGT2B7* 802 was detected, which is related to low MMF clearance.

**Conclusions:** The low clearance of MMF by *UGT2B7* 802 wild type polymorphism found in this patient might have led to endothelial dysfunction which is likely contribute to MMF induced refractory ascites.