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Rare, but severe side effects of Mycophenolate Mofetil in pediatric kidney transplant patients.

Jinwoon Joung[1], Jeong yeon Kim[2], Heeyeon Cho[1]
[1]Department of Pediatrics-Nephrology, Samsung Medical Center, Korea, Republic of
[2]Department of Pediatrics-Nephrology, Chungnam National University Hospital, Korea, Republic of

Case Study

Mycophenolate Mofetil (MMF) is a crucial immunosuppressive medication used in kidney transplantation (KT). The common side effects of MMF include gastrointestinal symptoms and leukopenia. MMF first needs to be metabolized to mycophenolic acid (MPA) to suppress purine biosynthesis for immunosuppression. In vitro study, MPA is supposed to cause anti-angiogenic effects on endothelial cells resulting in vascular dysfunction. We report two pediatric cases manifesting unusual MMF side effects which might have been caused by vascular dysfunction. In case 1, a 7-year-old Korean boy received deceased donor kidney transplantation, and MMF, tacrolimus, methylprednisolone (mPD) was started. After 50 postoperative days (POD), refractory ascites developed. Kidney, heart, and liver diseases were ruled out. There was a previous report of an adult KT patient with MMF toxicity presenting with uncontrolled ascites, and MMF was changed to azathioprine in our patient. Four weeks later, ascites resolved without any additional treatment. After ascites resolution, MMF was rechallenged, and shortly after, he developed diarrhea, and MMF was ceased. In case 2, a 6-year-old Korean boy received living donor KT from his mother, and MMF, tacrolimus, mPD was started. He had three mPD pulse therapy with the clinical and pathologic diagnosis of acute cellular rejection. During the period of the third episode of acute rejection, he complained of recurrent abdominal pain with diarrhea. Colonoscopy was done and huge, deep ulcers were found around the ileocecal valve. With evidence of a case report of terminal ileitis by an MMF in an adult, MMF was changed to enteric-coated MPA for slow intestinal release, and symptoms were relieved after five days. From these two cases in this report, clinicians should always be concerned about the rare, but severe side effects of MMF in KT patients presenting with unusual manifestations that might have been caused by vascular dysfunction.