

Resolution of Severe Anaemia and Hypotension Secondary to Rectal Ulcers in a Renal Transplant Patient after Conversion from Mycophenolate Mofetil to Enteric-coated Mycophenolate Sodium (*myfortic*[®])

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1. Case Study

The patient was a 47-year-old man who developed end-stage renal disease as a result of vascular nephropathy (nephrosclerosis). He was also diagnosed with ethylic polyneuropathy, had arterial hypertension with episodes of severe orthostatic hypotension, and suffered from depression as a result of bipolar disorder. He received a renal transplant from a deceased donor. Initial immunosuppression comprised a single dose of intravenous prednisolone (500 mg), mycophenolate mofetil (MMF) 1000 mg twice a day and prednisone 40 mg/day, with basiliximab induction (20 mg on days 0 and 4). The serum creatinine levels after transplantation are shown in figure 1. On day 10, cyclosporine microemulsion was initiated at a dose of 300 mg every 12 h, with the dose adjusted according to C₂ levels (i.e. blood concentration at 2 h post-dose) to maintain them within acceptable levels, the prednisolone dose was reduced to 10 mg/day and MMF was continued at 1000 mg twice a day. At the time of discharge, serum creatinine was 203 µmol/l (creatinine clearance 32 ml/min) and the haemoglobin level was 11.9 g/dl.

One month after transplantation, the patient reported abdominal pain and acute, severe rectal bleeding, which caused severe anaemia and hypovolaemia, in turn leading to tachycardia and orthostatic hypotension. This was exhibited by postural drop, with the patient being unable to rise from a resting position. Non-specific distal rectal ulcers were diagnosed by rectosigmoidoscopy, and biopsy showed morphologically non-specific mucosal hyperplasia with low-grade inflammation, negative for cytomegalovirus and pp65 antigenaemia; these changes were felt to be causally related. The patient's depression worsened as a result of his condition. MMF was immediately discontinued, and enteric-coated mycophenolate sodium (EC-MPS, *myfortic*[®]) was initiated at 1080 mg/day in divided doses (which was 50% greater than the bioequivalent dose of MMF). Anaemia was treated with a transfusion of two units of whole blood. After conversion to EC-MPS, abdominal pain, rectal bleeding and anaemia resolved completely. The patient's depression also improved, which was attributed to the return of normal arterial pressure, a reduction in rectal bleeding and the healing of rectal ulcers resulting from the change of

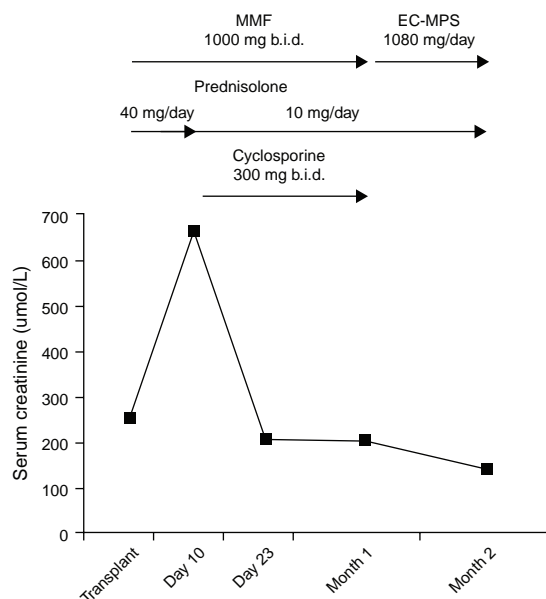


Fig. 1. Serum creatinine level over time. The cyclosporine micro-emulsion dose was adjusted according to C_2 levels (i.e. blood concentration at 2 h post-dose). **b.i.d.** = Twice a day; **EC-MPS** = enteric-coated mycophenolate sodium; **MMF** = mycophenolate mofetil.

immunosuppression and blood transfusion. One month later, the patient had regained a good general state of health with a functioning renal graft (serum creatinine $138 \mu\text{mol/l}$), which has continued since.

2. Discussion

The gastrointestinal adverse events most commonly associated with MMF therapy are nausea, vomiting, diarrhoea and abdominal pain. More severe adverse events, such as the rectal ulceration seen in this patient, may also be causally associated with the use of MMF.^[1] Given the severity of the patient's condition, we chose to convert him immediately to EC-MPS, rather than undertaking MMF dose reductions or waiting to see if his symptoms resolved spontaneously. After treatment of the resulting anaemia and conversion to EC-MPS, a complete resolution of the ulcers and accompanying haemodynamic effects were observed, with no adverse effect on graft function.

Reference

1. Behrend M. Adverse gastrointestinal effects of mycophenolate mofetil: aetiology, incidence and management. *Drug Saf* 2001; 24: 645-63

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