Methylprednisolone/prednisone/tacrolimus

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Early post-renal transplant hyperglycemia and increased appetite: 2 case reports

A 64-year-old man and a 56-year-old man were described, who developed early post-renal transplant hyperglycemia or increased appetite during treatment with methylprednisolone, prednisone or tacrolimus [*not all dosages and outcomes stated; routes not stated*].

Patient 1: The 64-year-old man, who had end-stage renal disease [ESRD] secondary to diabetes presented to the hospital in USA for kidney transplant. He had receiving treatment with unspecified oral diabetes medications for a few years and then was transitioned to basal-bolus insulin. Thereafter, he was started on haemodialysis in 2013, after which his insulin requirement decreased until he was able to completely stop using insulin in 2017. He received a deceased donor kidney in 2020. On the day of surgery and on postoperative day (POD) 1, he received methylprednisolone, followed by prednisone 60mg twice a day on POD 2, tapering until the dose was down to 7.5mg on POD 56 onward. During admission, tacrolimus was also initiated. On POD 1, he developed early post-renal transplant hyperglycemia and was given insulin lispro. After two weeks of transplantation, he developed COVID-19 secondary to early post-renal transplant hyperglycemia. Hence, he was readmitted and was kept on home doses of insulin. After his discharge, he continued to be followed by the endocrinology team. Eventually, he was transitioned to glimepiride approximately eight weeks after transplantation.

Patient 2: The 56-year-old man, who had autosomal dominant polycystic kidney disease and chronic kidney disease presented to the hospital in USA for kidney transplant. He had no prior history of diabetes. In February 2020, he underwent living donor kidney transplant. He received immunosuppressant drug therapy with tacrolimus, prednisone and mycophenolate mofetil. While inpatient, he developed early post-renal transplant hyperglycemia. Then, he started receiving neutral protamine hagedorn (NPH) insulin with breakfast along with insulin glulisine correction scale with meals. After two days of his discharge, his NPH insulin was decreased. In view of tapering dose of prednisone and lower blood glucose (BG) values, correctional insulin was stopped. However, at a follow-up visit 1 week later, he reported increased appetite and higher glucose levels, so NPH insulin was increased and insulin glulisine was added. One month later, prednisone was further titrated down to 7.5mg daily at this time insulin was discontinued and he was switched to alogliptin with a good BG control.

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