

A Case of Tacrolimus Related Posttranslated Diabetes Mellitus(PTDM)

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Background

Tacrolimus is highly potent immunosuppressant agent. Despite it is quite prophylactic effect on renal allograft rejection, the most marked side effect of tacrolimus is lead to posttranslated diabetes mellitus. There are some predictive risk factors which are determined on develeopment of tacrolimus related diabetes mellitus: Advanced age, familial history, genetic factors, ethnicity, impaired glucose tolerance or metabolic syndrome in pre-transplantation period, obesity or overweight, immunosuppressant dose, additional other immunosuppressants,presence of associated hepatitis,

Objective

We present a case of tacrolimus related diabetes mellitus to pay attention predictive risk factors before renal transplantation.

Case: 15 years old boy had choronic renal failure due to vesicourethral reflux. He was referred by Department of Pediatric Nephrology because of blood glucose level higher than normal. His weight was 42kg and his height was 144cm and his BMI was 22. Blood tension was arterial:130/90 mm/Hg.

When his health records of pre-transplantation period were revised, we realised that he had metabolic syndrome: Blood glusose test were as high as 280 mg/dl. LDL: 167mg/dl. Triglyceride was 190g/dl. He had hypertension. HbA1C was 4.1. when he was admitted to our clinic, his laboratory test were following:Glucose:501mg/dl, LDL: 182mg/dl, triglyceride was 164g/d,. HbA1C:14.3,insulin: 2,2U/mlC-peptide:1,4. Islet cell antibodies (Anti-GAD, Anti-ICA, Anti-IA) were negative. After translanptation, he was given tacrolimus 0,15mg/kg/day and prednisolone 0,5mg/kg/day plus mycophenolate mofetil 1200mg/m²/day. In the 12th weeks, he was diagnosed tacrolimus related diabetes mellitus. The our case had metabolic syndrome that is mentioned one of predictive risk factors.

Conclusion : We suggest to screen and be monitored predictive risk factors in pre-transplantaiton period. Measures should be taken to prevent modifiable risk factors.

