

Guillain-Barre Syndrome after Kidney Transplantation: A Case Report

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Abstract

Background: Guillain-Barre Syndrome is an unusual complication of hematopoietic stem cell transplantation but it is extremely rare after solid organ transplantation such as kidney or liver transplantation. **Case report:** A 48-year-old man, a case of kidney transplantation presented with generalized weakness in an ascending pattern. History and examination were compatible with the diagnosis of Guillain-Barre Syndrome (GBS) and paraclinical studies confirmed this diagnosis. He was treated for Guillain-Barre syndrome but no significant response was observed. **Conclusion:** Guillain-Barre syndrome rarely appears after organ transplantation but it should be considered in a patient presenting with its associated symptoms after transplantation. [GMJ. 2013;2(1):35-36]

Keywords: Guillain-Barre syndrome, Kidney, Transplant, Weakness, Organ transplant

Introduction

Guillain-Barre syndrome is an acute inflammatory demyelinating polyradiculoneuropathy characterized by progressive muscle weakness, areflexia and sensory abnormalities.¹ It is believed to be a result of humoral and cellular responses directed against peripheral nerves.^{1,2} Campylobacter jejuni is believed to be the most frequent identifiable infection. Guillain-Barre syndrome is a rare complication in the setting of hematopoietic stem cell transplantation.³⁻⁶ There are some case reports of GBS after bone marrow transplantation. It is very rare in solid organ transplants.³ Guillain-Barre syndrome is also reported in one case after heart transplantation with partial response to plasmapheresis.⁷

Two patients with typical GBS characteristics have been reported after kidney transplantation. They partially responded to standard therapies which are plasmapheresis and hyperimmune gammaglobuline.⁸ The conventional treatment for GBS was used in these cases with partial response.

Case Presentation

A 48-years-old man, a case of unexplained chronic renal failure underwent renal transplant from an unrelated donor two months before admission in neurology ward. He was on immunosuppressive therapy with prednisolone, mycophenolate mofetil and tacrolimus and his renal function tests were in normal range. Two months after transplantation he

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presented with symmetrical weakness of both lower extremities with an ascending pattern and progression to upper limbs within one week. He also complained of dysphagia and mild dyspnea but had no sphincteric problem. Neurological examination revealed decreased muscle power in both lower and upper limbs (3/5 and 4/5 respectively). All deep tendon reflexes were absent (0/2). Lumbar puncture showed high protein (61 mg/dL), normal cell count (RBC: 0, WBC: 3 all lymphocytes), sugar (54 mg/dL) and pressure (15cm H₂O) of cerebrospinal fluid. Antibodies to monosialoganglioside (Anti GM1) were not checked. Electrodiagnostic studies (electromyography and nerve conduction velocity) confirmed the diagnosis of GBS. He was treated with 5 sessions of plasma exchange, without significant improvement in his neurological state. He was discharged and physiotherapy was done outside the hospital. After two months of follow up, he had residual weakness and was unable to walk independently.

Discussion

We reported a novel case of Guillain-Barre syndrome following solid organ transplantation in an Iranian man which is assumed to

be a very rare complication. Graft versus host disease and side effect of drugs should be ruled out before diagnosing GBS. Our patient and the donor did not have familial consanguinity, so considering this and other clinical data, graft versus host disease was less likely. He was not taking the drugs for a long period, so we did not expect this presentation to be side effect of the drugs after such a short period of time. Guillain-Barre syndrome was the diagnosis as physical examination and electrodiagnostic studies confirmed it. It was one of the rare cases of GBS following solid organ transplantation. We did not detect much recovery in our case after treatment with plasmapheresis. Guillain-Barre syndrome happens rarely after organ transplant⁹ but it should be kept in mind in a patient presenting with weakness after transplantation. In this case conventional treatments did not result in significant change and improvement in GBS outcome.

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