

CASE REPORT

Live Related Kidney Transplant: A Rare Case Report of Graft Survival 22 Years after, in a Nigerian

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ABSTRACT

Kidney transplant is the most appropriate renal replacement therapy in terms of survival, quality of life and long term cost. We report 81 years old Nigerian whose kidney transplant lasted for 22 years. He encountered various challenges including complications relating to the long term impact of immunosuppression and infection.

Key words: Survival, Graft, Rejection, Transplant, Kaposi

INTRODUCTION

The emergence of kidney transplant about six decades ago has been associated with an improving outcome resulting mainly from reduction in graft rejection and infection.¹ However, even with the improving allograft survival, approximately a third of kidney

transplant patients lose allograft function within 5 years.²

In most resource poor nations including Nigeria, kidney transplantation is not readily available. Till date there is no documented report of a functional allograft among Nigerian kidney transplant patients lasting

up to 2 decades. We hereby report a functional allograft in an 81 year old Nigerian, 22 years after kidney transplant.

Case Report

Mr AR is an 81 year old retired public servant who had a live related kidney transplant in a hospital in London 22 years prior to presentation. The indication for transplant was end stage kidney disease from hypertensive nephrosclerosis. The transplant and post transplant medications (tabs cyclosporine 200mg twice daily, tabs azathioprine 25mg twice daily and tabs prednisolone 10mg daily) were sponsored by his employers then, a multinational company. He was also on tabs isoniazid and tabs pyridoxine 300mg and 25mg, respectively. He continued on same dose of the medications and due to financial reason was not followed up for 10 years prior to his presentation to us.

He was in apparent good health until 3 weeks prior to presentation when he observed insidious but progressive development of rashes and swelling of his lower limbs. The rashes were neither pruritic nor painful and does not discharge, but bled easily. There were no features suggestive of renal, cardiac or hepatic decompensation.

He is married and has 8 children; his brother was hypertensive but there was no history of diabetes mellitus or kidney disease in the family. He neither took alcohol nor tobacco.

He was a cheerful elderly man in no obvious respiratory distress. He was not pale, jaundiced, dehydrated or febrile and his blood pressure was 120/80 mmHg. Both lower limbs were oedematous but not pitting, and had multiple silvery maculo-papular and nodular rashes extending from the feet to the thighs affecting all the surfaces of the lower limbs. There were no erythema, scaling, crust, bleeding or scratch mark.

There was a long vertical right lumbar/iliac scar measuring 12cm. The transplanted kidney was the only palpable abdominal organ at the right iliosacral region. Other systems on examinations were normal.

A diagnosis of post transplant Kaposi sarcoma was made. The dermatologist was consulted and skin biopsy was taken.

The investigations revealed normal complete blood count, urinalysis, liver function test, lipid profile and chest X- ray. HIV, HBsAg, and HCV assays were non reactive. The electrolyte, urea and creatinine were normal with eGFR of 66.1ml/min/1.73m². The abdominal Ultra sound scan revealed normal renal allograft in the right paracolic region, and bilateral shrunken/blighted native kidneys; other abdominal organs were normal. The cyclosporine level was markedly elevated (356ng/ml).

The skin histology revealed cluster of capillary channels in the dermis with congestion, interspersed with spindle like cells which is consistent with diagnosis of Kaposi sarcoma.

Tabs isoniazid and pyridoxine were discontinued. The doses of tabs cyclosporine and prednisolone were reduced to 100mg twice daily and 7.5mg daily, respectively. The azathioprine was continued at 25mg twice daily. Tabs ciprofloxacin 500mg twice daily was commenced. Tabs sirolimus was prescribed but not available.

Patient showed good response with resolution of the oedema and regression of the rashes. The latest cyclosporine level was 148ng/ml.

However the patient developed acute urinary retention, the urologist was consulted who managed as a case of cancer of the prostate.

He has remained in good clinical state and the kidney allograft function had remained normal.

DISCUSSION

The bedrock of kidney transplant is to restore normal kidney function and quality of life comparable to the general population with normal kidneys. The long term outcome has not been as good as short term results.

The index patient, a Nigerian residing in Nigeria has lived for 22 years post transplant with good quality of life and functional graft. This is a rare feat considering the resource

poor background with various challenges in the nation. Though the patient had the privilege of the transplant and post transplant immunosuppressive therapy being sponsored by the employer, for 10 years he was not properly followed up. This is a common challenge in management of kidney disease in Nigeria where there are few/poor facilities and personnel to manage the patient. This is made worse by poverty, ignorance and lack of support from government and nongovernmental organisations.^{3,4}

Non adherence to immunosuppressive medications in renal transplant recipients has been reported to result in higher rate of acute rejection episodes, allograft dysfunction, graft loss and patient death.⁵ Poor drug therapy adherence have been documented in 24.5% of kidney transplant recipients in developing countries.⁶ Lack of fund to procure medication, ignorance on the part of patients, non availability of the medication in these countries, and high cost of these medication are some of the responsible factors. Thus financial support to patients as in the index patient, government policies to reduce the cost and patient's education will ameliorate this poor drug adherence.

Traynor *et al.* in a study of 255 patients who survived kidney transplantation for 20 years and above reported the following as factors that promote long term outcome - young age of recipient and donor, good HLA matching especially HLA-B, female sex, short cold ischaemic time and absence of acute rejection.⁷ Other studies have corroborated these factors except that male sex was found in many studies to support long term outcome.⁸

Furthermore, shorter pre-transplant dialysis, prompt graft function, no panel reactive antibody, presence of cytomegalovirus IgG antibody in the recipient and use of newer immunosuppressive medications has been associated with long term outcome of kidney transplant. The index kidney transplant patient and donor were in their early middle age and young adult age group, respectively at the time of transplantation. It was a live related kidney transplant with good HLA

match, short cold ischaemic time, male sex and satisfactory immediate post transplant condition. There was no documented acute rejection and recipient's pre-transplant dialysis was short. These factors in our patient may have contributed to the longevity of the kidney graft, as it is functioning optimally 22 years post transplant notwithstanding that patient is resident in Nigeria, with no regular follow up care.

Kidney transplantation has been associated with many complications which could be surgical, graft related and/or drug related. With the improvement in the outcome of kidney transplantation, long-term complications expectedly have become increasingly relevant. These challenges have been related to the degree and duration of immunosuppression and occasionally the immunosuppressive agent. Thus careful selection and monitoring of the immunosuppressive regimen, screening and early detection of these complications and their prompt management may prevent and/or ameliorate the morbidity and mortality associated with the long term complications.

The index patient presented with Kaposi sarcoma and later with bladder outlet obstruction caused by cancer of the prostate. Studies have reported that the incidence of cancer in the kidney transplant population to be about 40% in patients 20 years after transplant; this is higher than about 6% cumulative risk for cancer in an age-matched, non transplanted population.^{9,10} Thus, there is need to include screening of cancer as part of long term management of kidney transplant patients. The most common malignancies encountered in the post-transplant patients are non-melanoma skin cancers, post transplant lymphotropic disease, and Kaposi sarcoma. Others, including non-Kaposi sarcomas, gastrointestinal, urogenital, and thoracic tumours have also been reported. Post transplant malignancies have been reported to occur more commonly in patients on immunosuppressive regimen with cyclosporine and azathioprine.¹⁰ Treatment

involves modification of the immunosuppressive drug regimen as was done for the index patient, resection of localized disease, and chemotherapy.

This case report highlights a potential for good long term outcome in a resource poor nations like Nigeria. There is need for

massive education and awareness programs among the patients and care givers, as well as policy makers and medical personnel to promote kidney transplant in these low income nations.

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