Successful Kidney Transplantation in Leprosy and Transitory Recurrence of the Disease[1]

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Although renal failure is a relevant cause of mortality in leprosy patients, kidney transplantation in this population has seldom been reported ([1, 5]). This is probably related to the fact that leprosy is largely confined to underdeveloped countries where resources for the treatment of chronic renal failure are limited.

In our country, there are about 5000 leprosy patients registered and distributed in six endemic areas under public health care control ([3]). The Spanish kidney transplantation program has been increasingly active in the last few years so that 800 transplants were performed in 1984 (21 transplants per million population).

We describe a case of lepromatous leprosy and chronic renal failure who received a renal transplant with good evolution of the graft and who experienced a recurrence of her illness 14 months after renal transplantation.

CASE REPORT

The patient is a 40-year-old white woman, seen initially in February 1981, and diagnosed as having chronic renal insufficiency secondary to interstitial nephritis. Regular hemodialysis treatment was started at that time. She was known to have been diagnosed at the age of 17 as having lepromatous leprosy and was on treatment with sulfones for 15 years following the diagnosis (until the age of 32). All dermatologic follow ups during hemodialysis treatment were normal. She received a cadaveric renal transplant in September 1982. The HLA typing of the recipient was Aw30/B14, Bw35/Dr1, Dr5 and that of the donor was A_2, Aw30/B13, Bw35/Dr1. At the time of discharge from the hospital, three months after transplantation, she was on a maintenance schedule of prednisone (20 mg/day) and azathioprine (150 mg/day); her serum creatinine at this time was 1.6 mg/dl.

Fourteen months after transplantation, she developed hypesthetic, indurated, erythematous and violescent plaques on the face, trunk and limbs. Her lepromin skin test was negative. A skin biopsy showed an atrophic epidermis. A grenz zone separated the epidermis from a nodular infiltrate in the dermis extending to the subcutaneous tissue, composed mainly of foamy histiocytes, occasional lymphocytes and polymorphonuclear leukocytes. Ziehl-Neelsen staining showed numerous intracytoplasmic bacilli arranged in globi. Skin smears from the earlobes and nose blows were all positive for acid-fast bacilli. A diagnosis of recurrence of lepromatous leprosy was made, and she was started on rifampin (600 mg/day) and dapsone (100 mg/day) while immunosuppressive treatment was maintained. After three weeks on this therapy, her serum creatinine rose to 2 mg/dl; rifampin was stopped and her renal function returned to previous values.

After ten months on sulfone therapy, a total resolution of her leprosy, both clinically and by nasal and skin scrapings, was observed. At present (27 months after the renal transplantation), the patient is normotensive; her serum creatinine is 1.5 mg/dl; there is no proteinuria; and the urinary sediment is normal. Although her leprosy seems to be in complete remission, she will continue indefinitely with sulfone therapy.

DISCUSSION

Leprosy is not a formal contraindication in renal transplantation. Transplantation practiced in patients with both lepromatous

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([1, 5]) and tuberculoid ([2]) leprosy has been described. The alteration in cellular immunity underlying patients with lepromatous leprosy allows an increased tolerance to skin homografts; perhaps this fact could be related to a good survival in an allografted kidney transplantation.

Mycobacterium leprae, as with every other intracellular bacteria, may be activated during a course of immunosuppressive therapy. Therefore, an expected complication after renal transplantation could be exacerbation of cutaneous lesions, just as has been described in a patient with lepromatous leprosy ([1]). On the other hand, steroid therapy may mask the typical signs and symptoms so that an atypical picture may result, making a straightforward diagnosis difficult ([6]). Treatment of the disease in transplanted patients may present the additional problem of ineffective immunosuppression if rifampin is employed since this drug induces hepatic catabolism of steroids and therefore reduces their pharmacologic activity. The use of this drug may be harmful since it may precipitate graft rejection ([4]).

In our patient, graft tolerance was good and in spite of requiring low doses of immunosuppressors, cutaneous lesions became evident in a typical form of the disease with no further diagnostic problems. Immunosuppressive drug doses were not modified and there was a good response to treatment of the skin lesions, although rifampin was discontinued because of worsening renal function.

We conclude that renal transplantation is a useful treatment in patients with leprosy and chronic renal failure. In view of the risk of reactivation of the disease, prophylactic therapy with sulfones should be initiated early and maintained indefinitely.

SUMMARY

A 40-year-old woman on chronic hemodialysis had been diagnosed as having lepromatous leprosy at the age of 17 and treated for 15 years with sulfones. She remained clinically free of leprosy during 19 months of hemodialysis and then underwent successful renal transplantation. Fourteen months after surgery, recurrence of leprosy was observed. In spite of immunosuppression, the skin lesions healed with sulfone treatment. Renal transplantation is a useful treatment in patients with leprosy and chronic renal failure.

RESUMEN

Una paciente de 40 años y en hemodiálisis crónica se diagnosticó como afectada de lepra a la edad de 17 años después de lo cual recibió tratamiento con sulfonas durante 15 años. La paciente permaneció clínicamente libre de lepra durante 19 meses de hemodiálisis y después se sometió a un transplante renal que resultó exitoso. Catorce meses después de la cirugía, se observó recurrencia de la lepra. No obstante la inmunosupresión, las lesiones en piel sanaron con el tratamiento sulfónico. El transplante renal es un tratamiento útil en pacientes con lepra y falla renal crónica.

RÉSUMÉ

On a découvert qu'une femme âgée de 40 ans, traitée par hémodialyse, avait été diagnostiquée comme atteinte de lèpre lépromateuse à l'âge de 17 ans et traitée pendant 15 ans par les sulfones. Cette malade n'a présenté aucun signe clinique de lèpre au cours des 19 mois pendant lesquels a duré l'hémodialyse; elle a ensuite subi avec succès une transplantation rénale. Quatorze mois après l'intervention chirurgicale, une réapparition de la lèpre a été notée. Malgré l'immunosuppression, les lésions cutanées ont guéri par traitement sulfoné. La transplantation rénale constitue un traitement utile chez les malades qui sont à la fois atteints de lèpre et de décompensation rénale chronique.

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