JOURNAL OF CLINICAL MICROBIOLOGY, May 1996, p. 1347 Vol. 34, No. 5
0095-1137/96/$04.00+0

Letters to the Editor

PCR for Diagnosis and Follow-Up of Two Cases of Disseminated Toxoplasmosis after Kidney Grafting

Toxoplasmosis is a rare but potentially life-threatening infection in immunodepressed patients (4, 5). Direct identification of *Toxoplasma gondii*, or detection of *T. gondii* DNA by PCR, can prove invaluable in such cases (1, 3, 4). Heart transplantation is the graft procedure most frequently associated with toxoplasmosis (2). We describe two cases of toxoplasmosis in kidney graft recipients.

Patient 1, a 40-year-old man, was seronegative for *T. gondii*, while his donor was seropositive. Fifteen days after grafting, he developed unexplained fever refractory to antibacterial, antifungal and antiviral drugs. Thirty days after grafting, we detected *T. gondii* DNA in peripheral blood, together with clear seroconversion (emergence of specific immunoglobulin G (IgG), IgM, IgA, and IgE). PCR was positive on bone marrow on day 5 of pyrimethamine-sulfadiazine therapy, and until day 11 was positive on blood. Fever abated on day 17 of treatment, and the patient is symptom free 10 months after grafting.

Patient 2, a 42-year-old woman with serologic evidence of past exposure to *T. gondii*, received a kidney from a seronegative donor. One month later she developed fever that failed to respond to broad-spectrum antibacterial chemotherapy. Samples of bronchoalveolar lavage fluid, cerebrospinal fluid, bone marrow, and peripheral blood were obtained 15 days later, when she developed dyspnea and a temperature of 40°C. All the samples were PCR positive for *T. gondii* DNA. Treatment with pyrimethamine-sulfadiazine was started, but the patient convulsed. An isolated increase in the anti-*T. gondii* IgG titer occurred (from 25 to 3,200 IU), and peripheral blood samples remained PCR positive for *T. gondii* DNA for 15 days after specific therapy was started. The patient is symptom free 2 months after transplantation.

These two cases of toxoplasmosis after kidney grafting are unusual: the first was a rare case of seroconversion with clinical manifestations (4), and the other was an apparently unique case of severe reactivation following transplantation with a seronegative donor. Gene amplification confirmed the diagnosis of disseminated toxoplasmosis in both patients and showed that *T. gondii* DNA persisted for 15 days after the outset of specific therapy. PCR negativity was obtained at the same time as the clinical improvement. These findings suggest that routine serologic testing after organ transplantation could be backed up by PCR when clinical manifestations compatible with toxoplasmosis occur.

REFERENCES

1. **Danneman, B. R., D. M. Israelski, D. S. Leoung, T. McGraw, J. Mills, and J. S. Remington.** 1991. Toxoplasma serology parasitemia and antigenemia in patients at risk for toxoplasma encephalitis. AIDS **5:**1363–1365.
2. **Holliman, R. E., J. D. Johnson, S. Adam, and J. R. Pepper.** 1991. Toxoplasmosis and heart transplantation. J. Heart Lung Transplant. **10:**608–610.
3. **Holliman, R. E., J. D. Johnson, D. Savva, N. Cary, and T. Wreghitt.** 1992. Diagnosis of toxoplasma infection in cardiac transplant recipients using the PCR. J. Clin. Pathol. **45:**931–932.
4. **Israelski, D. M., and J. S. Remington.** 1993. Toxoplasmosis in the non-AIDS immunocompromised host. Curr. Clin. Top. Infect. Dis. **13:**322–356.
5. **Luft, B. J., and J. S. Remington.** 1992. Toxoplasmosis encephalitis. Clin. Infect. Dis. **15:**211–222.

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