

Rhodotorula rubra infection in a kidney transplant patient with pancytopenia

Immunocompromized patients, such as those who undergo transplantation are at a high risk to be infected by opportunistic agents. Fungal infections are a cause of morbidity in renal transplanted patients, related with the long-term immunosuppression, the use of broad-spectrum antimicrobial agents and the use of catheters.

Pancytopenia was detected in a 55-year old male kidney transplant recipient with type 2 diabetes mellitus on dietary treatment. Chronic renal failure secondary to IgA nephropathy had been diagnosed in September 1998 and he had been treated with peritoneal dialysis until February 1999 when he received a cadaveric donor kidney transplant. He was then treated with prednisone and tacrolimus and did not undergo acute rejection episodes. He had several urinary tract infections after transplantation, which were treated with broad spectrum antibiotics.

Ten months after renal transplantation, pancytopenia was discovered in an outpatient visit: WBC $2 \times 10^9/L$, hemoglobin 90 g/L and $46 \times 10^9/L$ platelets. A bone marrow aspirate was performed; round and oval capsulated structures were observed within macrophages and a few extracellularly in the May-Grünwald Giemsa stained smears. The Gram-stained smear revealed the presence of round to oval intramacrophagic Gram-positive structures. A bone marrow sample was, therefore, inoculated into blood and Sabouraud agar plates and, after incubation at 25°C for 4 days, *Rhodotorula rubra* yeasts were identified. The patient was treated with amphotericin B lipid complex (Abelcet®) for 15 days with a total dose of 4.5 g. The peripheral blood counts a month after the end of treatment were: WBC $5 \times 10^9/L$, hemoglobin 118 g/L and $244 \times 10^9/L$ platelets. A new bone marrow aspirate was performed: no yeasts were observed in the smears, and the cultures were negative.

Rhodotorula spp. are yeasts which are normal inhabitants of skin and environments such as shower curtains and toothbrushes. *Rhodotorula rubra* has been reported in rare instances to cause fungemia in patients with acute leukemia and after bone marrow transplantation.¹⁻³ Most of the cases reported were related to catheters, and the source of infection was likely the skin, as opposed to the gastrointestinal tract of many candidemias.^{2,4} In the case reported herein the diagnosis of fungal infection was made after investigation of a pancytopenia in a kidney transplant recipient. This case shows the importance of bone marrow studies in immunosuppressed patients with unexplained cytopenias.

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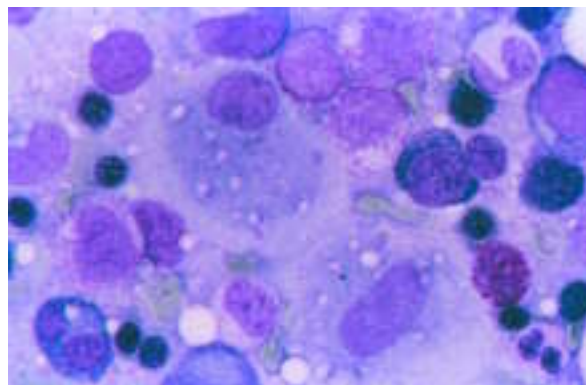


Figure 1. Round to oval capsulated yeasts inside macrophages. May-Grünwald-Giemsa x1,000.

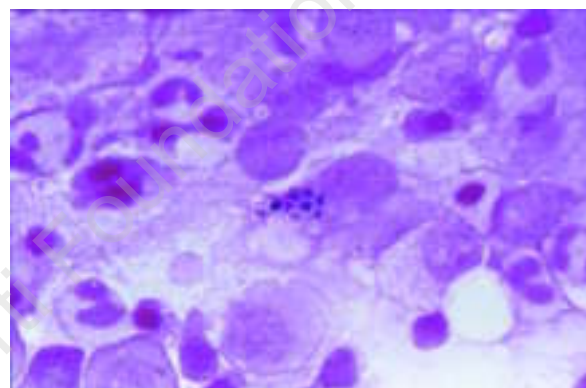


Figure 2. Gram-positive oval structures. Gram stain x1,000.

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