Acute septic arthritis after kidney transplantation due to Acremonium

Sir,

Fungal infections in renal transplant recipients are relatively rare, occurring mainly in the first 6 months post-transplantation. They are mainly due to Candida and Aspergillus [1]. We report the first case of acute septic arthritis due to Acremonium after kidney transplantation.

Case report. A 57-year-old man was transferred to our hospital for acute arthritis of the right knee. His medical history included coronary artery disease treated by angioplasty and an aorto-bifemoral endovascular prosthesis in 1989. Dialysis was started in 1995 because of nephroangiosclerosis.

He received a kidney transplant in October 1996. The immunosuppressive regimen included tacrolimus, azathioprine and steroids, without induction therapy. He developed no impaired glucose tolerance. Twenty-eight months after transplantation, he was hospitalized for arthritis of the right knee. He had no fever, but the C-reactive protein level was 76.5 mg/l. Arthrocentesis of the right knee yielded cloudy, yellow fluid with 5000 white blood cells/mm³ (100% polymorphonuclear cells). No infectious agent was revealed by Gram staining and no crystals were detected. Acremonium species grew on mycobacterial cultures of the synovial fluid and on blood cultures after 21 days. No cutaneous involvement of the fungus could be determined. Echocardiography and Doppler ultrasound examination of the dialysis fistula failed to reveal any mycotic aneurysms. The patient was treated with 350 mg intravenous (i.v.) liposomal amphotericin B. Because of acute kidney failure this treatment was stopped and replaced by 180 mg/day amphotericin lipid complex IV combined with 600 mg/day oral itroconazole. The patient needed dialysis three times. Clinical and infectious parameters improved and blood cultures for mycobacteria became negative. The creatinine level returned to 130 μmol/l and itroconazole was continued for 3 weeks.

One month later, after withdrawal of itroconazole, recurrence of fungal infection in the right knee was diagnosed. No localization was found on CT scan of the aorto-bifemoral prosthesis. The patient was successfully
treated with i.v. amphotericin B for 10 days in combination with 800 mg/day itroconazole.

Eighteen months later, despite being treated with itroconazole, an aneurysm of the right renal artery and a left mycotic endophthalmitis appeared, due to Acremonium. Treatment with 150 mg/day \( \text{amphotericin B lipid complex IV} \) was unsuccessful. Aorto-bifemoral endovascular prosthesis and kidney transplant had to be removed and the patient returned to dialysis.

**Discussion.** Acremonium infection occurs in immunocompromised individuals with cutaneous, cardiac, neurologic, ocular or pulmonary localizations [2,3]. Only two cases of septic arthritis have been described [4,5]. Infection due to Acremonium species has been reported in renal graft recipients in three cases. Two were mycetomas, a common clinical manifestation [2], and one patient suffered from pulmonary abscess associated with gastrointestinal tuberculosis 7 years after transplantation [6].

Fungal infections may be difficult to treat because of renal toxicity of amphotericin B and because of drug interactions with itroconazole, which is highly metabolized by the same isoenzyme of cytochrome P450 as tacrolimus [7]. Other sites of infection must be systematically sought and prosthetic material has to be removed whenever possible [3]. The persistence of prosthetic material and immunosuppression due to tacrolimus could probably explain the unfavourable outcome of our patient with recurrence of Acremonium infection.


DOI: 10.1093/ndt/gfg040