Secondary syphilis in a patient with renal transplant

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Introduction

Syphilis is a sexually acquired infection caused by the bacterium Treponema pallidum. The initial clinical manifestation is usually a sole and painless chancre at the site of inoculation (in HIV patients several chancres are frequent). This is termed primary syphilis [1]. The chancre usually heals spontaneously within a few weeks. If untreated, a haematogenous spreading of T. pallidum from the site of inoculation occurs and develops a secondary syphilis [2], characterized by a cutaneous rash, fever, headache, malaise and diffuse lymphadenopathy. The rash typically involves the palms (absence in 20% of patients with secondary syphilis) and soles, but it may also include mucosal surfaces. Lesions may be maculopapular, papular, annular or even pustular. Similar to primary disease, the acute symptoms of secondary syphilis typically resolve spontaneously in several weeks. When patients remain untreated, a late or tertiary syphilis may appear in 40% at any time from 1 to 30 years after primary infection [3], producing cardiovascular (aortitis), gummatous (nodular lesions most commonly in skin and bones) and central nervous system syphilis (neurosyphilis, particularly general paresis and tabes dorsalis).

Case report

We describe a 46-year-old Caucasian man, who suffered from secondary syphilis 20 months after a renal transplant. Chronic renal disease in this patient is related to chronic pyelonephritis due to vesicoureteral reflux. He started haemodialysis treatment in 1981. Acute rejection occurred in 1986 after a kidney graft from a deceased donor, entering in haemodialysis programme in 1987. He developed pulmonary tuberculosis in 1988, which was treated with isoniazid and rifampicin for 9 months. The hepatitis C virus serology was positive from 1996, with negative viraemia up to now, and without evidence of chronic hepatopathy. He received a second cadaver renal graft in July 2007. The immunosuppressive regimen was anti-thymocyte globulin, FK506, mycophenolate mofetil and prednisone. Currently, he has chronic dysfunction of the graft, and the level of creatinine is 1.7 mg/dl.

Twenty months after the renal transplant, the patient presented with malaise, arthralgias in wrists without arthritis, headache and maculopapular reddish rash (without itching or bulla) located on his chest, back, arms, legs and palms (Figure 1). There was no fever. Blood test parameters were normal, blood and urine cultures were negative, and chest X-ray and abdominal ultrasound were also normal. Other serological tests like rheumatoid factor, protein catabolic rate, antistreptolysin O, antinuclear antibodies, immunoglobulins, complement and cryoglobulins were normal. The patient confirmed risk factors to sexually transmitted diseases (homosexual behaviour), and we studied serologic testing of HIV (with negative ELISA with absence of HIV’s RNA or the antigen HIV) and Venereal Disease Research Laboratory (VDRL) and fluorescent treponemal antibody absorption (FTA-ABS) that turned out to be positive (1/1280). Prior to transplantation, syphilis testing was performed as per local protocol in the deceased donor and in the patient. At the time, both VDRL and FTA had been negative in donor and recipient.

A diagnosis of secondary syphilis was made. On repeat examination, there were no chancres on the skin, penis, mouth or anus. There were no neurological manifestations (normal neurological exploration and lumbar puncture with negative VDRL in cerebrospinal liquid). Benzathine penicillin G 2.4 million units intramuscular (IM) once weekly for three weeks was administered. Two days after the first dose of treatment, resolution of cutaneous rash and systemic symptoms was observed.

Discussion

When a patient with renal graft has systemic symptoms (like in our case, malaise, arthralgia and cutaneous rash), the initial diagnostic suspicion is directed to infectious or
There are several documented [7,8] cases of early (primary and secondary) or late syphilis in patients after solid-organ transplantation. There are references in the literature about syphilis in immunosuppressed patients, related to syphilis in HIV-infected patients [9]. Among these patients, both the severity of the infection and the response to the treatment is similar to the HIV noninfected patients. New syphilis infections due to transmission by infected renal graft have been described [10]. In this particular case, we think that syphilis was not transmitted via the transplant itself because the syphilis testing in the donor was negative, and the patient confirmed the sexual practices of risk. In our unit, syphilis testing is routinely done in deceased donors.

Teaching points

(1) Although uncommon, sexually transmitted disease among the transplanted patients must be considered.
(2) In secondary syphilis, the rash typically involves the palms.
(3) Syphilis should be considered in a picture of fever and cutaneous rash in the palms.
(4) Syphilis testing should be part of the protocol for pre-transplant evaluation in the deceased donor.

Conflict of interest statement. None declared.

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