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A rare case of syphilis associated with renal and hepatic involvement

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ABSTRACT We present an unusual case of syphilis that despite starting treatment with penicillin has evolved with renal complications. Due to glomerulonephritis with nephrotic syndrome the case required shared care between the renal physician and dermatologist. Doctors of different specialties need to keep in mind that early syphilis can have visceral involvement and patients might need prompt, specific therapeutic intervention.

Case

A 25-year-old male patient without significant personal or family medical history was admitted to the Dermatology Department suffering from primary syphilis. He was a heterosexual man and the infective sexual contact was approximately five weeks before hospitalization. He started the specific treatment with benzathine penicillin 2.400.000 IU followed by the discharge from the hospital, as he tolerated the first doses of penicillin very well, without Jarish-Herxheimer reaction following the initiation of the antibiotic. He received advice to continue the treatment with penicillin as an outpatient.

After ten days the patient returned to the emergency department having an altered general condition, low-grade fever, loss of appetite, vomiting, oliguria, generalized edema, and lumbar pain. During the medical examination we noticed pale skin, renal type generalized edema, dull pain radiating to the flanks, tender kidneys on palpation, and left side inguinal lymphadenopathy. The urine volume during 24 hours was of 900 ml. We established the diagnosis of acute glomerulonephritis with nephrotic syndrome [1].

The investigations revealed the following abnormalities: erythrocyte sedimentation rate 100 mm/h, fibrinogen 720 mg/dl, positive reactive C protein; hypoproteinemia 5 g/dl; hypercholesterolemia 371 mg/dl; hyperlipidemia 1,168 mg/dl; renal impairment: urea 64 mg/dl and creatinine 1.87 mg/dl; hepatic cytolysis: aspartate transaminase 77 IU/L; alanine transaminase 75 IU/L with increase of alkaline phosphatase 324 IU/L;

circulating immune complexes 42 IU/L. The urine examination showed proteinuria 12 g/24h, microscopic hematuria with dysmorphic red blood cells, and cylindruria hyaline cylinders. The HIV, and hepatitis B and C screenings were negative.

Due to the recent history of syphilis infection, a dermatologic consultation was requested. Examination showed in the coronal sulcus presence of ulceration with indurated basis and satellite inguinal lymphadenopathy. The clinical examination was completed by the specific serological investigations that were intensely positive: VDRL++++ (venereal disease research laboratory) (dilution 1/4), positive RPR (rapid plasma reagin), and TPHA++++ (treponema pallidum hemagglutination assay). The ophthalmologic and the neurologic examinations showed no change. Ultrasound revealed moderate hepatomegaly, ascites and kidneys increased in size.

The final and reviewed diagnosis was made: Early secondary syphilis with the persistence of the primary chancre, associated with syphilitic glomerulonephritis with nephrotic syndrome and hepatic involvement [1,2]. Since the secondary stage of syphilis starts around ninth week after infection and as our patient had visceral involvement, although no exanthemas or enanthemas had been found clinically, we felt that this was an early stage of secondary syphilis and that the persistence of ulcus durum would be consistent with this stage.

Treatment with penicillin 2.400.000 IU/day was started with oral steroid therapy, prednisone 1 mg/kg/day, and correction of the hypoproteinemia (human albumin perfusions) and diuretics (furosemide and spironolactone) were initiated. After the first 10 days of treatment we noticed a favorable clinical progress: improvement of the general condition, the disappearance of the low-grade fever and of the edema, the normalization of urine volume, the remission of lymphadenopathy, and the epithelialization of the primary chancre. At the time of discharge from the hospital we noted proteinuria < 0.5 g/24h without hematuria, the acute renal impairment had disappeared, hepatic tests had settled, and that the specific syphilis serological tests were also improved, VDRL ++ (dilution1/2) and TPHA +++.

After the patient was discharged from the hospital, he continued the treatment with benzathine penicillin 2.400.000 IU/week (for two weeks) and prednisone in reducing doses with regular monitoring of the urine and renal tests. At 2-month follow-up the proteinuria was absent. At 6-month follow-up VDRL was negative and TPHA ++ had improved, remaining positive.

The serological and urine tests monitoring continued every three months in the first year and every six months in the second year. After two years TPHA ++ was still positive but VDRL and RPR remained negative.

Discussion

This rare case is interesting from the nephrologic point of view due to the rare systemic involvement of the kidneys during the syphilis infection, leading to the presentation of membranous glomerulonephritis [1,2,3]. For dermatologists, it is important to keep in mind the possibility of early and multiple visceral involvement of syphilis that sometimes can be severe but with a rapid favorable evolution with supportive treatment [4].

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