A rare case of secondary syphilis under anti-TNF treatment

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Anti-tumour necrosis factor (anti-TNF) therapy was approved for use in Crohn's disease in 1998, and it has changed the paradigm of treatment, leading to improved rates of response and remission in patients [1]. TNF-α is an important proinflammatory cytokine and has been implicated in the pathogenesis of many inflammatory and autoimmune diseases, including inflammatory bowel disease. TNF-α is essential for the formation and maintenance of granuloma; it plays a role in macrophage activation and differentiation and phagosome formation. Its inhibition can lead to increased risk of bacterial, viral, and fungal infection [2, 3]. We would like to describe a case of secondary syphilis in a patient treated with anti-TNF.

A 25-year-old male patient suffering from Crohn's disease with colonic involvement for the last 6 years and under anti-TNF factor medication for the last 4 years (7.5 mg/6 weeks) visited our clinic with symptoms of fever, fatigue, and sore throat, which started a month before. Although he received antibiotic treatment, there was no improvement. During physical examination maculopapular non-itching exanthematous lesions of the back, palms, soles, and trunk were inspected. In addition, there were swollen neck lymph nodes; the pharynx had oedema and redness. The auscultation of the lungs was typically normal. Laboratory tests showed elevated C-reactive protein (CRP) (21.10 < 3.19 mg/l). We performed ultrasound of the neck and abdomen, which revealed swollen lymph nodes > 1 cm diameter at the neck region. The largest lymph node was located below the submandibular gland with 37.5 × 12.1 mm in dimension, while the abdominal ultrasound did not show any significant pathological findings. During our history taking, the patient revealed that his partner was suffering from the same symptoms after unprotected sexual intercourse 40 days earlier, and he tested positive for syphilis. According to all these findings, we proceed with serological testing for *Treponema pallidum* (anti-FTA and VDRL) and for HIV. The results were positive for syphilis and negative for HIV. The patient was treated with Penicillin G benzathine for 21 days, and the symptoms and skin lesions disappeared after treatment. A second ultrasound of the neck after treatment did not reveal swollen lymph nodes. The decision was to restart infliximab, due to its efficacy, with no relapse 1 year after follow-up.

Syphilis, caused by *Treponema pallidum*, is a common infection worldwide and has 3 stages: primary syphilis is the stage of initial inoculation of *T. pallidum*. It is characterized by a painless ulcer located at the inoculation site. If untreated, mucosal lesions and lymphadenopathy will develop in most patients. In secondary syphilis there is bacteraemia and wide dissemination of *T. pallidum*. Late (tertiary) syphilis relates to the chronic, end organ complications (particularly cardiovascular and neurological) often many years after initial infection. The clinical presentation of syphilis is diverse, with patients presenting to a wide range of practitioners and services [4]. The cutaneous lesions of secondary syphilis are variable in appearance and may mimic diseases such as psoriasis and lichen planus [5, 6].

Our patient presented early secondary syphilis probably activated under infliximab. He was treated with Penicillin G benzathine for 21 days and his symptoms disappeared. Due to the increased use of immunosuppression, inflammatory bowel disease patients are at increased risk of opportunistic infections. It is often difficult for clinicians to recognize opportunistic infection. Syphilis under anti-TNF is uncommon and should be treated early because of the danger of neurosyphilis and its rapid worsening. To our knowledge, this is the first case of secondary syphilis in a patient with Crohn's disease. This case demonstrates the value of recognizing the clinical symptoms of syphilis.

Conflict of interest

The authors declare no conflict of interest.

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