Rectal syphilis - A case report

Dimitrije Damjanov*†, Tatjana Jocić†, Olgica Latinović-Bošnjak*†,
Dragomir Damjanov*†, Željka Savić†, Dijana Kosijer*†, Vladimir Vračarić*†,
Tihomir Orlić†, Žarko Krnetić*†

University of Novi Sad, Faculty of Medicine, *Department of Internal Medicine,
Novi Sad, Serbia; Clinical Centre of Vojvodina, †Clinic for Gastroenterology
and Hepatology, Novi Sad, Serbia

Abstract

Introduction. Syphilis rarely affects anorectal region. The symptoms are nonspecific and are commonly disregarded in our country. Therefore, they pose a difficulty both for a diagnosis and for a treatment. We presented a patient with the clinical, laboratory, endoscopic and histological characteristics of rectal syphilis who was initially suspected to have inflammatory bowel disease. Case report. A 29-year-old man was hospitalized with a suspected inflammatory bowel disease, with symptoms such as frequent blood-stained diarrhea, lower abdominal pain and a loss of appetite. The physical examination showed maculopapular skin rash on the body. The ileocolonoscopic examination revealed finely granulated rectal mucosa, the loss of vascular pattern, and at 3 cm from the anal verge, an exulcerated submucosal lesion 1.2 cm in diameter, with two smaller, similar looking lesions. The histological examination of biopsies showed diffuse inflammatory-cell infiltration, with cryptitis, Paneth cell metaplasia with granuloma without caseous necrosis, which was highly suggestive of Crohn’s disease. The Treponema pallidum test results were positive [hemagglutination assay (TPHA)] with a titer 1 : 2,560 and the rapid plasma reagin test (RPR) with a titer 1 : 16. The ensuing detailed anamnesis on the patient’s sexual behavior showed that the patient had unprotected anal sexual relation with another man and the diagnosis of secondary syphilis was confirmed. After the treatment with benzathine penicillin G once a week, during a three-week period, the patient had no symptoms and had normal inflammatory markers, with a significant decrease of RPR titre and normal mucosa on rectosigmoidoscopy. Conclusion. Taking in consideration the variable clinical and endoscopic manifestations of this disease, it is necessary to take a detailed history of sexual behavior, since it can be crucial for determining the diagnosis and differential diagnosis of syphilis.

Key words: diagnosis, differential; homosexuality; inflammatory bowel diseases; rectal diseases; sexually transmitted diseases; syphilis; treatment outcome.

Apstrakt

Uvod. Zahvatanje rektuma sifilisom je retko. Simptomi ove infekcije nisu specifični i u našoj sredini se često na njih ne misli. Zbog toga ona predstavlja dijagnostički i terapijski izazov. Prikazan je bolesnik sa kliničkim, laboratorijskim, endoskopskim i histološkim karakteristikama rektalnog sifilisa kod koga se inicijalno sumnjalo na inflamatornu bolest creva. Prikaz bolesnika. Bolesnik star 29 godina je hospitalizovan pod sumnjom na zapaljensku bolest creva, sa tegobama u vidu učestalih stolica sa primesama krvi, bolova u donjem delu trbuha i gubitka apetita. Fizikalnim pregledom je zapažena je makulopapulozna ospa po koži. Ileokolonosko- pija je videna fino granulisana sluznica rektuma bez vaskularne šare i na 3 cm od anokutane granice egzulcerisana submukozna le- zija veličine 1,2 cm, sa dve manje lezije sličnog izgleda. Patohisto- loškim pregledom biopsija opisan je difuzni inflamatorni infiltrat, sa kripitismom, metaplasijom Panetovih čelija, sa prisustvom granuloma bez kaseozne nekroze, što je bilo visoko suspicito na Krono-
**Introduction**

Sexually transmitted diseases may spread to parts of gastrointestinal tract. The most common causes of the diseases of anorectal region are chlamydia, gonorrhea, herpes simplex virus (HSV) and syphilis. *Treponema pallidum* infection is the third cause of symptomatic infection of anorectal region in men who have sex with men, after the HSV infection and gonorrhea. Syphilis rarely affects anorectal region. The symptoms of these infections are nonspecific and are commonly disregarded in our country. Therefore, they pose a difficulty both for a diagnosis and for a treatment.

We presented a patient with rectal syphilis with the clinical, laboratory, endoscopic and histological characteristics which suggested Crohn’s disease.

**Case report**

A 29-year-old man was hospitalized with suspected inflammatory bowel disease, with the symptoms such as frequent blood-stained diarrhea, lower abdominal pain and a loss of appetite. The physical examination of the systems was negative, except for the presence of maculopapular skin rash on the body. He denied previous diseases or risky sexual behavior.

The laboratory test results revealed the increased inflammatory markers – leucocytes 12.15 × 10⁹/L (reference range 4.0–10.0 × 10⁹/L), C-reactive protein 58.1 mg/L (reference range 0.0–5.0 mg/L) and erythrocyte sedimentation rate 80 mm/h (reference range 3–8 mm/h). The parameters of liver and renal function were within the range, without anemia or hypoproteinemia. The stool sample tests on *Clostridium difficile* toxin A and B, bacteria, parasites and protozoa were negative. Ileocolonoscopic examination revealed finely granulated rectal mucosa, the loss of vascular pattern, and at 3 cm from the anal verge, an exulcerated submucosal lesion, 1.2 cm in size was found, with two smaller, similar looking lesions, 4–5 mm in size (Figure 1).

The pathohistological examination of rectal biopsies showed diffuse inflammatory-cell infiltration, with cryptitis, Paneth cell metaplasia, with granuloma without caseous necrosis, which was highly suggestive of Crohn’s disease. The computed tomography (CT) scan of the pelvis revealed the enlargement of inguinal lymph nodes, up to 16 mm in diameter. Due to the maculopapular skin rash, and with the goal of investigating the other granulomatosis, the additional examinations were performed. While the anti-neutrophil cytoplasmic antibodies (ANCA), antinuclear antibodies (ANA) and angiotensin converting enzyme (ACE) tests were negative, the *Treponema pallidum* hemagglutination assay (TPHA) results were positive with a titer 1 : 2,560 and the rapid plasma reagin test (RPR) with a titer 1 : 16. The ensuing detailed anamnesis on the patient’s sexual behavior showed that the patient had unprotected anal sexual relation with another man. Upon consultation with a dermatovenereologist, the diagnosis of secondary syphilis was confirmed. Because of common co-occurrence with other sexually transmitted diseases, the additional tests were performed, including the HIV and hepatitis C antibodies, HBs antigen and urethral swab for chlamydia and gonorrhea, which were all negative.

**Discussion**

Syphilis is a sexually transmitted systematic disease caused by the *Treponema pallidum* spirochete. The disease develops through the phase of early syphilis, which lasts up to two years, and late syphilis. Early syphilis includes primary, secondary and early latent stages, while late syphilis includes late latent and tertiary stages.

Primary syphilis is characterized by the presence of solid chancre (ulcus durum) at the place of inoculation, most commonly found at genitals with regional lymphadenopathy. At least 5% of such lesions are extragenital, so that the ulcer may pass unnoticed if located in the anorectum, cervix, or in the oral cavity. It is usually solitary, although the multiple ulcerations may also occur. In some untreated patients the chancre does not epithelize, and may be present in the secondary stages of the disease, as in our patient’s case. Secondary syphilis is characterized by maculopapular skin rash,
plaques, ulceration, erosion and papula on the mucosa, as well as by the systemic manifestations (generalized lymphadenopathy, mild form of hepatitis, splenomegaly, uveitis, arthritis, parotitis, glomerulonephritis), which is the reason why syphilis is often called “the great imitator”.

Due to its nonspecific symptoms, rectal syphilis represents a diagnostic challenge, although the insight into the relevant literature reveals that, despite being rare, it is recognizable in comparison to other localizations of the disease. Only several dozens of cases of primary and secondary anorectal syphilis was described in the past several decades. Most cases described involve the homosexual and bisexual men, mainly coming from the underprivileged social groups in larger cities. Among the homosexual male population, it has been found in 2% of the patients with rectal symptoms. 25%–50% cases of syphilis co-occur with the HIV infection.

The patients usually complain about defecation disorders, diarrhea with blood and mucus, urgency of defecation, the symptoms which are not specific and suggest all benign diseases of anorectal region and tumors.

The endoscopic image of rectal syphilis includes the inflammatory, infiltratory vegetant lesions, ulceration and pseudotumors, which are not located in the proximal segments of the colon. Therefore, the differential diagnostic specter is rather wide, including the inflammatory bowel diseases, lymphomas, viral ulcerations [cytomegalovirus (CMV) and HSV], lymphogranuloma venerum, solitary rectal ulcer and rectal carcinoma, which necessitates multiple biopsies. In case of our patient, endoscopy revealed finely granulated rectal mucosa, the loss of vascular pattern, with an exulcerated submucous lesion and two minor satellite changes, which may suggest Crohn’s disease, also confirmed by the histological results of the granuloma in biopsies. Except in Crohn’s disease, granuloma without caseous necrosis can also be present in other diseases, such as sarcoidosis, vasculitis, lymphogranuloma venerumerum, but also in syphilis, although its histological image is most commonly nonspecific and corresponds to chronic inflammation.

For diagnosing syphilis, the most important tests are nonspecific [veneral disease research laboratory (VDRL) and RPR] and specific serological (TPHA) tests.

The treatment recommendation of all stages of syphilis is penicillin (benzathine penicillin G, benzyl penicillin). In the patients with sensitivity to penicillin and depending on the stage and form of syphilis, the treatment may include doxycycline, ceftriaxone or azithromycin.

Syphilis is a serious health threat world-wide. In the past 15 years there was an increase in its incidence and prevalence, especially of the anorectal form in the men who had sex with men. It may occur on its own, or together with the HIV infection, or other sexually transmitted diseases.

Conclusion

Taking into consideration the variable clinical and endoscopic manifestations of this disease, it is necessary to take a detailed history of sexual behavior, since it can be crucial for determining the diagnosis and differential diagnosis of syphilis.

REFERENCES

1. Hamlyn E, Taylor C. Sexually transmitted proctitis. Postgrad Med J 2006; 82(973): 733–6.
2. Zhao WT, Liu J, Li YY. Syphilitic proctitis mimicking rectal cancer: A case report. World J Gastrointest Pathophysiol 2010; 1(3): 112–4.
3. Pisani Ceretti A, Virdis M, Maruni N, Arena M, Masci E, Magenta A, et al. The Great Pretender: Rectal Syphilis Mimic a Cancer. Case Rep Surg 2015; 2015: 434198.
4. Janier M, Hegyi V, Dupin N, Unemo M, Tiplica GS, Potocnik M, et al. 2014 European guideline on the management of syphilis. J Eur Acad Dermatol Venereol 2014; 28(12): 1581–93.
5. Chapel TA, Prasad P, Chapel J, Lekas N. Extragenital syphilitic chancres. J Am Acad Dermatol 1985; 13(4): 582–4.
6. Golčin Z. Venerology. Novi Sad: Faculty of Medicine, University of Novi Sad; 2014. (Serbian)
7. Cha JM, Choi SI, Lee JI. Rectal syphilis mimicking rectal cancer. Yonsei Med J 2010; 51(2): 276–8.
8. Adachi E, Katouchi T, Oka M, Sato H, Imai K, Shimizu S, et al. Case of secondary syphilis presenting with unusual complications: syphilitic proctitis, gastritis, and hepatitis. J Clin Microbiol 2011; 49(12): 4394–6.
9. Yılmaz M, Memişoğlu R, Aydin S, Tabak O, Mete B, Memişoğlu N, et al. Anorectal syphilis mimicking Crohn’s disease. J Infect Chemother 2011; 17(5): 713–5.

Received on October 23, 2017.
Accepted on December 21, 2017.
Online First December, 2017.