CASE REPORTS

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Rectal syphilis - A case report

Rektalni sifilis

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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 siphilis 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 siphilis.

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 zapažena je makulopapulozna ospa po koži. Ileokolonoskopijom je viđena fino granulisana sluznica rektuma bez vaskularne šare i na 3 cm od anokutane granice egzulcerisana submukozna lezija veličine 1,2 cm, sa dve manje lezije sličnog izgleda. Patohistološkim pregledom biopsija opisan je difuzni inflamatorni infiltrat, sa kriptitisom, metaplazijom Panetovih ćelija, sa prisustvom granuloma bez kazeozne nekroze, što je bilo visoko suspektno na Kronovu bolest. *Treponema Pallidum Hemaglutination Assay* (TPHA) test je bio pozitivan u titru 1 : 2 560 i *Rapid Plasma Reagin* (RPR) test pozitivan u titru 1 : 16. Nakon detaljno uzete anamneze o seksualnom ponašanju, utvrđeno je da je bolesnik imao nezaštićen analni seks sa drugim muškarcem i potvrđena je dijagnoza sekundarnog sifilisa. Nakon terapije benzatin penicilinom jednom nedeljno u trajanju od tri nedelje, bolesnik je bio bez tegoba, sa normalnim laboratorijskim nalazima, značajnim padom titra RPR testa a rektosigmoidoskopijom je viđena normalna sluznica. **Zaključak.** Uzimajući u obzir raznolike kliničke i endoskopske manifestacije sifilisa, neophodno je detaljno uzeti podatke o seksualnom ponašanju, što može biti presudno prilikom postavljanja dijagnoze.

Ključne reči:
dijagnoza, diferencijalna; homoseksualnost; creva, zapaljenske bolesti; rektum, bolesti; venerične bolesti; sifilis; lečenje, ishod.

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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 [1]. *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 [1–3].

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 × 10^9/L (reference range 4.0–10.0 × 10^9/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.

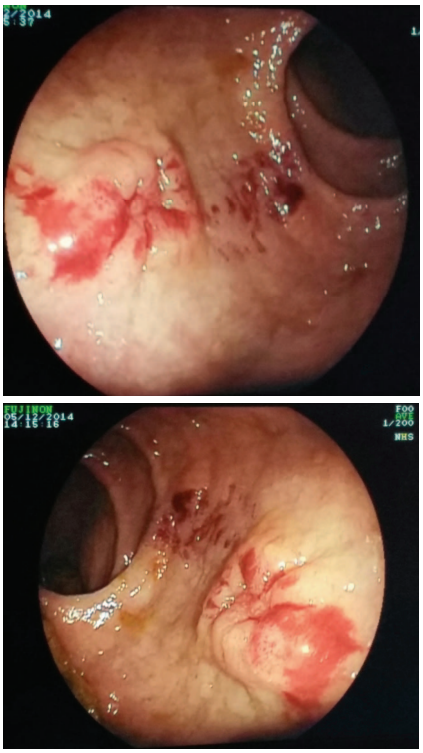

Fig. 1– Endoscopic image of the rectal ampulla with finely granulated mucosa, the loss of vascular pattern and exulcerated submucous lesion with two minor lesions.

The patient was treated with intramuscular therapy of 2.4 million units of benzathine penicillin G once a week, during a three-week period. One month after commencing the treatment, the patient had no symptoms and had normal inflammatory markers with a significant decrease of RPR titre. Control rectosigmoidoscopy revealed normal mucosa of the rectosigmoid colon.

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 [4].

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 ulcus may pass unnoticed if located in the anorectum, cervix, or in the oral cavity [5, 6]. 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" [6].

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 [7]. 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 [1].

The patients usually complain about defecation disorders, diarrhea with blood and mucus, tenesmus, urgency of defecation, the symptoms which are not specific and suggest all benign diseases of anorectal region and tumors [1, 2, 8].

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 [cytomegalo virus (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 venererum, but also in syphilis, although its histological image is most commonly nonspecific and corresponds to chronic inflammation [2, 7].

For diagnosing syphilis, the most important tests are nonspecific [veneral disease research laboratory (VDRL) and RPR] and specific serological (TPHA) tests [6].

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 [4].

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 [8, 9].

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 siphilis.

R E F E R E N C E S

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, Maroni 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, Potočnik 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. *Golušin 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, Koibuchi T, Okame 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. *Yilmaz M, Memisoglu R, Aydin S, Tabak O, Mete B, Memisoglu N,* et al. Anorectal syphilis mimicking Crohn's disease. J Infect Chemother 2011; 17(5): 713–5.

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