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Hematochezia as the first presentation in rectal Chlamydia trachomatis infection: A case report

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Case Report

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Abstract

Background: Hematochezia was a common gastrointestinal condition, but it is uncommon when caused by chlamydial trachomatis infection.

Case presentation: We report the case of a 31-year-old man who presented with intermittent hematochezia. Colonoscopy showed extensive mucosal congestion and edema, erosion, superficial ulcers and white moss at the rectosigmoid junction and rectum. No neoplastic cells were found on biopsy of the rectal lesion; however, there was inflammatory infiltration with lymphoplasmacytic cells in the whole layer of the mucosa and a small amount of neutrophil infiltration. The rectal swab test was performed by polymerase chain reaction (PCR) and confirmed Chlamydia trachomatis infection. The patient was diagnosed as proctitis infected by Chlamydia trachomatis, and successfully treated with oral doxycycline hydrochloride (0.2 g daily) for 10 days, resulting in complete resolution of symptoms.

Conclusions: This case highlights the importance of considering sexually transmitted infections in the differential diagnosis of unexplained hematochezia and proctitis.

1 Introduction

Chlamydia trachomatis is one of the most common sexually transmitted pathogens worldwide, primarily affecting the urogenital tract. Rectal infection caused by Chlamydia trachomatis is increasingly recognized, particularly in men who have sex with men, but remains underdiagnosed in gastroenterology practice. Clinical manifestations of rectal chlamydia trachomatis infection are often nonspecific and overlap with inflammatory bowel disease, hemorrhoids, and other causes of proctitis.[1] Although rectal bleeding is relatively common in gastroenterology outpatient or emergency practice, initial rectal bleeding caused by Chlamydia trachomatis infection is uncommon and easily confused with other diseases. We report a case of rectal Chlamydia trachomatis infection initially presenting with hematochezia to emphasize the importance of a thorough sexual history and targeted microbiological tests.

2 Case Summary

2.1 Case presentation

A 31-year-old man was referred to our hospital with a 3-week history of stool with mucus and blood 1–2 times each day. Nearly a week aggravated appeal symptoms, sometimes fatigue, abdominal discomfort. His past medical, family, and psycho-social history including relevant genetic information was unremarkable, and he was not taking any medications.The blood routine test showed that monocytes was 0.98*109/L. Stool routine test showed occults blood positive (+), and stool Calprotectin level was elevated to 258.3ug/g. The patient was treated with oral Clostridium Butyricum MIYARISAN (2.1g daily) for two weeks, but the patient's symptoms have not relieved. So colonoscopy was performed for

evaluation of lower gastrointestinal bleeding. Colonoscopy showed extensive mucosal congestion and edema, erosion, superficial ulcers and white moss at the rectosigmoid junction and rectum.There was no active bleeding during and after the procedure (Fig. 1A,B).

The patient was suspected as ulcerative colitis. No neoplastic cells were found on biopsy of the rectal lesion; however, there was inflammatory infiltration with lymphoplasmacytic cells in the whole layer of the mucosa and a small amount of neutrophil infiltration. After treatment with Mesalazine(1.0g daily) for 2 weeks, there was no significant improvement. On further history-taking, the patient reported a history of receptive anal intercourse. Dermatological examinations found perianal mucosa mild edema, no obvious secretion and ulceration. Given the patient's sexual history and endoscopic findings of proctitis, further microbiological test was performed. Rectal swab testing was positive for Chlamydia trachomatis by polymerase chain reaction(PCR). The patient was diagnosed as proctitis infected by Chlamydia trachomatis. Relevant laboratory test results are shown in Table 1.

Table 1
Relevant laboratory test results

Test	**Result**
A HIV antibody test	negative
Toluidine red unheated serological test (TRUST)	negative
Treponema pallidum particle agglutination assay (TPPA)	negative
Mycoplasma incubation	negative
Neisseria gonorrhoeae incubation	negative
Chlamydia trachomatis by Polymerase Chain Reaction(PCR)	positive
Fecal occults blood	positive
Stool Calprotectin level	258.3ug/g (elevated)
C. difficile toxin A&B	negative
Fecal parasites	negative
Stool salmonella Culture	negative
Stool Shigella Culture	negative

2.2 Treatment and Outcome

The patient was then treated with oral doxycycline hydrochloride (0.2 g daily) for 10 days. The hematochezia disappeared after treatment. Follow-up PCR test for rectal chlamydial trachomatis confirmed microbiological cure 5 days after stopping the use of antibiotics. Follow-up colonoscopy one month after treatment showed no abnormality of rectal mucosa (Fig. 2A,B). The patient was counseled regarding partner notification and safe sexual practices.

3. Discussion

Proctitis is defined as inflammation of the anal canal and distal rectum arising from either infectious or noninfectious cause. Chlamydia trachomatis colitis is a rare disease with multi-manifestation, which is usually asymptomatic and can mimic other diseases, such as ulcerative colitis, Crohn's disease, Behcet's disease, Schistosomiasis colitis, rectal malignant tumor and intestinal tuberculosis, etc,[1] therefore precise diagnosis becomes more difficult. Infectious proctitis remains an underrecognized entity, although sexually transmitted diseases, especially bacterial infections, exhibit a marked increase in their incidence. [2] Chlamydia trachomatis is representing the second most common etiologies in men who have sex with men (MSM) .[3] The study reveal a high prevalence of chlamydia trachomatis infections among MSM, particularly in the rectal area. [4] The clinical presentation is often subtle and nonspecific, which contributes to diagnostic delay. [5] In our case, hematochezia was the predominant presenting symptom, a feature that can easily lead clinicians to suspect inflammatory bowel disease, hemorrhoids, or colorectal neoplasia, etc. Endoscopic findings in rectal chlamydial trachomatis infection are heterogeneous and lack specificity, typically including mucosal congestion, edema, friability, erosions, and superficial ulcerations. [6] These features are often shared with other causes of proctitis, thereby limiting their diagnostic value. Notably, differences may exist between non–lymphogranuloma venereum (non-LGV) and lymphogranuloma venereum (LGV) Chlamydia trachomatis infections. Non-LGV infection generally presents with mild, nonspecific inflammation, characterized by erythema and mucosal injection without ulceration, whereas LGV is associated with more severe inflammatory changes, including ulceration, pronounced mucosal friability, and bleeding.[7] Despite these distinctions, both endoscopic and histopathological examinations demonstrated non-specific inflammatory changes, further complicating the diagnosis.

Consequently, a high index of suspicion and appropriate microbiological test are essential. Failure to recognize rectal chlamydia infection may result in unnecessary immunosuppressive therapy and prolonged morbidity. Incorporating sexual history-taking and rectal Nucleic Acid Amplification(NAAT) testing into routine clinical practice can facilitate timely diagnosis and appropriate management.

4. Conclusion

Collectively, rectal Chlamydia trachomatis infection should be considered in the differential diagnosis of unexplained hematochezia and proctitis, particularly in patients with high-risk sexual behaviors. Early recognition and appropriate microbiological test are essential to avoid misdiagnosis and ensure timely treatment.

Declarations

Acknowledgements

None.

Ethics declarations

Ethics approval and consent to participate

Ethical approval is held to be unnecessary by the Ethics Committee of Shanghai United Hospital, as this is a single, uncommon case encountered during clinical practice.

Consent for publication

Written informed consent was obtained from the patient for publication of this case report and any accompanying images. A copy of the written consent is available for review by the Editor-in-Chief of this journal.

Competing interests

The authors declare that they have no competing interests.

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Author Contributors:

All authors had taken care of the patient. Q-R Yang wrote the initial draft. L-M Bo did the Colonoscopy. Q Wang wrote and reviewed the manuscript.

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Figures



Figure 1

A,B Colonoscopy showed extensive mucosal congestion and edema, erosion, superficial ulcers and white moss at the rectosigmoid junction and rectum.

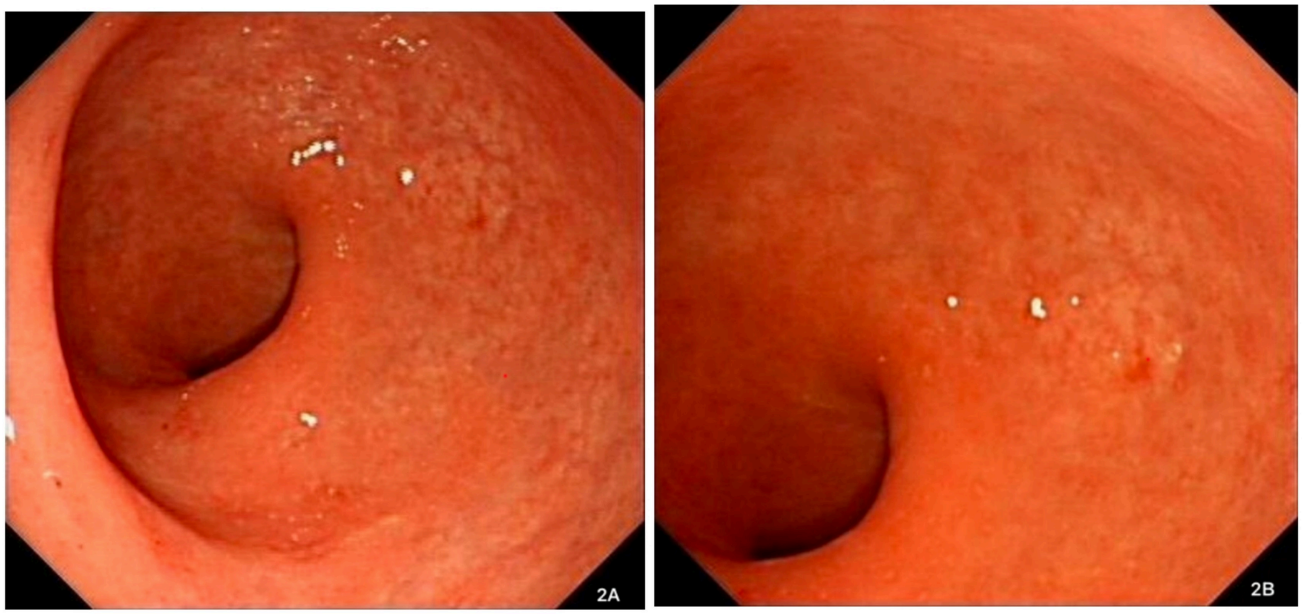


Figure 2

A.B Follow-up colonoscopy one month after treatment showed no abnormality of rectal mucosa.