Case report

Primary chancre in the rectum: A report of rare case of syphilis

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Abstract

Rectal syphilis is rare and it is easily diagnosed as rectal cancer. We report a case of a 32-year-old male patient complained of intermittent blood stool for 2 months. The patient was initially diagnosed suffering from rectal cancer based on clinical findings, Computed Tomography (CT) and sigmoidoscopy examination, but rectal biopsy specimens and lymph node biopsy revealed no cancer cells. After knowing that he had a history of homosexuality, rectal syphilis was diagnosed because of positive syphilis-related indices. CT imaging of rectal syphilis was retrospectively evaluated and it may play a role in directing the adequate diagnosis with subsequent effective treatment of such patient population.

Keywords: Syphilis; Rectum; Chancre; Computed Tomography; Sigmoidoscopy

1. Case report

A 32-year-old male patient complained of bloody stool intermittently for 2 months was referred to our hospital for suspected rectal cancer. Digital rectal examination revealed an approximate 3 cm firm mass around rectal wall from anus verge to the mass. Laboratory studies showed normal routine blood chemistry and serum carcinoembryonic antigen. CT with contrast revealed patchy enhancement of an irregular, nodular mass involving the circumference of thickened rectal wall with lymphadenopathy in the left inguinal region (Fig. 1). Sigmoidoscopy examination showed a markedly irregular, submucosal tumor-like mass extending 3–5 cm proximal from the anal canal, and severe ulcerative proctitis with marked mucosal friability (Fig. 2). Histologic examination of rectal biopsy specimens revealed the inflamed mucosa and there was no cancer cells detected. Lymph node biopsy showed chronic inflammatory cell infiltration predominantly composed of plasma cells, plenty of histiocytic lymphocytes and some blood vessels (Fig. 3). Further careful questioning revealed a risky sexual behavior of rectal intercourse, then syphilis-related serological studies were performed, and positive toluidine red untreated serum test (TRUST) and Treponema pallidum hemagglutination assay (TPHA) confirmed the diagnosis of syphilis. After treatment with 2.4 million units of benzyl penicillin in a single intramuscular injection for 3 weeks, the symptoms and lymphadenopathy in the left inguinal completely resolved. Follow-up sigmoidoscopy after 3 weeks revealed complete resolution of the rectal mass.

2. Discussion

Syphilis, a venereal infection caused by the spirochetal bacterium treponema pallidium, has been considered an important public health concern in China [1]. Syphilis is transmitted by vaginal or oral sexual contact. However, rectal syphilis is a rare case, especially with primary chancre formation. Most physicians tend to consider rectal mass with
ulceration as a neoplasm [2]. In this case, clinical signs, CT and sigmoidoscopy all suggested a rectal neoplasm.

We retrospectively analyzed the characteristics of the CT manifestation of this patient and found that (1) The rectal lesion involved the rectal wall diffusely and showed inhomogeneous enhancement on contrast enhanced CT. The presence of low density areas in the central portion of the lesion suggested necrosis. The size of the lesion was too small to be a necrotic tumor. There were multiple perirectal lymph node enlargements, as reported by Jae and colleagues [3]. (2) There was lymphadenopathy in the left inguinal region on CT. If the rectal mass was cancer, lymphadenopathy in the left inguinal region suggested metastasis, which meant late stage, but the patient didn't appear obstruction and cachexia. (3) The patient's age (32 years) was too young for rectal cancer.

Sigmoidoscopy evaluation of the rectum revealed severe ulcerative proctitis with marked mucosal friability, extending 3–5 cm proximal from the anal canal, and the mass extended around the wall of the rectum. Rectal canal was narrow. Histologic examination of rectal biopsy specimens revealed chronic active colitis as in Furman's report [4]. There was no evidence of cancer.

Syphilis is a sexually transmitted infection (STI) and can be transmitted by all types of intimate contact including genital,
oral, and anal sex. Homosexuality is very important for clinical diagnosis in this case, but the patient wouldn’t open up to the doctor easily, just like in Korea or certain other countries, where homosexuality still carried a stigma [2,5,6]. Therefore, physician should recognize the CT features and make an effort to get the clinical history. CT imaging may play a role in directing the adequate diagnosis with subsequent effective treatment of such patient population.

Following a literature search, we found publication of case reports of rectal syphilis including one case diagnosed by F-18 FDG PET/CT [7], and another one diagnosed by CT and confirmed by antibiotic therapy [8].

In summary, CT findings of an inhomogeneously enhancing, irregular mass surrounding thickened rectal wall should raise the suspicion of rectal syphilis in addition to the differential diagnosis of rectal cancer, other infections. However, real sexual history should be taken, as well as syphilis-related serological testing, to confirm the diagnosis.

References