

Isolated perianal tuberculosis

E. Akgun¹, F. Tekin², S. Ersin¹, H. Osmanoglu¹

Departments of ¹General Surgery and ²Gastroenterology, Ege University Medical School, Izmir, Turkey, tel.: +232-343 43 43/41 01, fax: +232-342 77 64, e-mail: drtekinfatih@yahoo.com, *corresponding author

ABSTRACT

Perianal tuberculosis, without the presence of any previous or active pulmonary infection, is extremely rare. A case of isolated perianal tuberculosis without gastrointestinal or pulmonary spread will be discussed here with an evaluation of the clinical features.

INTRODUCTION

The incidence of pulmonary tuberculosis has decreased and extrapulmonary tuberculosis has become very rare with the introduction of effective antituberculous chemotherapy. However, although the rates of mortality and morbidity due to tuberculosis are decreasing, it has been reported that there is an increase in the cases of tuberculosis due to the increasing incidence of acquired immune deficiency syndrome (AIDS).¹ On the other hand, perianal tuberculosis, without the presence of previous or active pulmonary infection, is extremely rare. Here, we present a case of isolated perianal tuberculosis without gastrointestinal or pulmonary spread.

CASE REPORT

An 80-year-old male patient was admitted with a history of perianal discharge and ulceration for the last six months. Treatment with topical antibiotics and epithelialising ointment had been ineffective. The patient was afebrile on admission. No lymphadenopathy was found on palpation, and physical examination of the respiratory tract was

normal. No palpable mass or organomegaly was detected on abdominal examination.

There was an ulceration in the left perianal region with a transverse diameter of 4 cm and vertical diameter of 3 cm (*figure 1*). Digital rectal examination revealed no pathological findings. Anoscopy was normal and no fistulas were noted. Laboratory studies showed normal values of haemoglobin, haematocrit, total leucocyte count, platelets and erythrocyte sedimentation rate. Liver enzymes and renal function tests were also within the normal range. Chest X-ray revealed no pathological findings.



Figure 1
An ulceration in the left perianal region at line 7 by proctological position, starting 2 cm from the anus, with a transverse diameter of 4 cm and vertical diameter of 3 cm was observed on admission

The perianal lesion was curetted and biopsy material was taken. Since only nonspecific granulation was found in the first biopsy, a second biopsy was performed a week later. Histological examination of the second biopsy showed epithelioid granulomas, Langhans' type multinucleated giant cells, caseous necrosis, and acid-fast bacilli. In addition, polymerase chain reaction (PCR) was positive for mycobacterium tuberculosis. A PPD test revealed a negative reaction with 4 mm of induration. PCR assays of the sputum collected on three subsequent days were negative for tubercle bacilli. Double-contrast barium studies of colon and small bowel were normal. No pathological findings were detected on upper gastrointestinal endoscopy and rectosigmoidoscopy. Computed tomography of the abdominal and pelvic region revealed no pathological findings either. Human immunodeficiency virus antibody test was negative.

We made a diagnosis of isolated perianal tuberculosis and started triple antituberculous treatment consisting of isoniazid (300 mg/day), rifampicin (600 mg/day), and pyrazinamide (2 g/day) No side effects occurred. His symptoms resolved and the perianal ulcer began to heal within the first month of treatment (*figure 2*). From the culture of the biopsy specimen, tubercle bacilli were isolated on Lowenstein-Jensen medium in the eighth week of



Figure 2
Healing of the ulcer within the first month of antituberculous treatment

treatment. Therapy with isoniazid and rifampicin was continued for six months. After six months, the lesion had disappeared, and only a mild granular region remained (*figure 3*). The patient is healthy without any symptoms and there is still no recurrence after one year of follow-up.

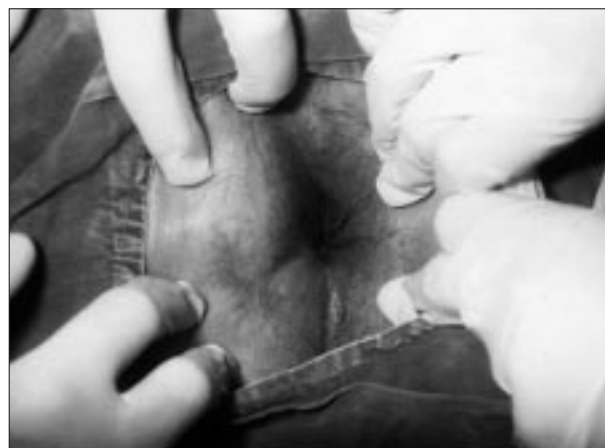


Figure 3
Recovery of the lesion (only a mild granular region was observed at the same localisation at the sixth month of the treatment)

DISCUSSION

We present here a case of perianal tuberculosis in an elderly patient without HIV infection. The incidence of tuberculosis of the gastrointestinal tract has dramatically decreased in the last few decades. Development of anti-tuberculosis chemotherapies and widespread use of pasteurised milk have played a major role in this decrease. In addition, better recognition of Crohn's disease prevents it from being misdiagnosed as gastrointestinal tuberculosis. However, tuberculosis of the gastrointestinal tract is still present in developing countries, particularly in large migratory communities. Recently, the number of cases of tuberculosis has shown a tendency to increase with the rising number of cases with AIDS in developed countries.¹ Extrapulmonary tuberculosis is responsible for 15% of all cases of tuberculosis. Extrapulmonary spread mainly consists of involvement of the pleura (26%), lymph nodes (17%), genitourinary tract (15%), bones and joints (14%), meninges (6%), peritoneum (4%) and miliary TB (8%).^{2,3} Tuberculosis of the gastrointestinal tract is responsible for 1% of all cases of tuberculosis. Tuberculosis may involve any part of the gastrointestinal system, such as the peritoneum, stomach, duodenum, ileocaecal region, colon, rectum, and anus. Of these, tuberculous peritonitis is the most common.² The most frequently affected part of intestinal tract is the ileocaecal region. Involvement of the appendix and jejunum is uncommon, and spread to the anus is much rarer.⁴ Tuberculosis of the gastrointestinal tract usually occurs as a result of spread from tuberculosis foci in the lungs. Ingestion of the bacilli from sputum may lead to invasion of the intestinal wall. Harland *et al.* presented two cases diagnosed as anal tuberculosis

associated with pulmonary tuberculosis.⁵ Sultan *et al.* documented data of seven cases of anoperineal tuberculosis observed between 1982 and 1999, and an association with pulmonary tuberculosis was found in each case.⁶ However, pulmonary tuberculosis may not be present and intestinal and peritoneal disease may develop by reactivation of the latent focus. Other mechanisms that have been considered are haematogenous spread and retrograde spread of *M. tuberculosis* into abdominal lymph nodes from a pulmonary site.⁷ In our patient, no pulmonary or gastrointestinal focus was found despite an extensive investigation.

Perianal tuberculosis may manifest as an ulcerative, verrucous, lupoid and miliary form. The most common type is the ulcerative lesion which tends to have well-defined boundaries and be characterised by mucopurulent discharge. The verrucous type tends to extend into the anal passage from the perianal region with a development pattern similar to that of a wart. However, it may appear as a haemorrhoidal nodule, perianal abscess or anal fistula.^{7,8}

Our patient presented with perianal ulceration, and no abscess or anal fistula was noted.

Crohn's disease plays a significant role in the differential diagnosis of perianal tuberculosis, and other conditions that should be considered are ulcerative colitis, herpes simplex lesions, syphilis, sarcoidosis, amebiasis, deep mycosis, lymphogranuloma venereum, and ulcerative neoplasms.^{7,9} Differentiating between perianal tuberculosis and Crohn's disease may be difficult. Both conditions have certain similar features including colonic skip lesions, ileocaecal spread and granulomas on histological examination. These two diseases may be difficult to distinguish from each other by macroscopic evaluation, and microscopic examination is needed. When tuberculosis is considered, a biopsy needs to be taken from the lesion; acid fast staining and if available polymerase chain reaction should be used for a rapid and accurate diagnosis. Finally cultures are needed to confirm the diagnosis and susceptibility testing.

CONCLUSION

In conclusion, since it is an extremely rare aetiological cause in patients with anal discharge and ulceration, the diagnosis of perianal tuberculosis is difficult to make when there is no pulmonary focus. It has to be kept in mind that cases of perianal tuberculosis may appear as incipient disease without the presence of any previous or active pulmonary infection. Tuberculosis has to be considered in the differential diagnosis of perianal ulcers since treatment with antituberculous agents may provide complete recovery.

REFERENCES

1. Raviglione MC, Snidar DE, Kochi A. Global epidemiology of tuberculosis. Morbidity and mortality of a worldwide epidemic. *JAMA* 1995;273(3):220-6.
2. Mehta JB, Dutt A, Harvill L, Mathews KM. Epidemiology of extrapulmonary tuberculosis. A comparative analysis with pre-AIDS era. *Chest* 1991;99(5):1134-8.
3. Sbarbaro JA. Tuberculosis in the 1990s. Epidemiology and therapeutic challenge. *Chest* 1995;108(Supp 2):58-62.
4. Aktogu S, Yorgancioglu A, Cirak K, Kose T, Dereli SM. Clinical spectrum of pulmonary and pleural tuberculosis: A report of 5480 cases. *Eur Respir J* 1996;9(10):2031-5.
5. Harland RW, Varkey B. Anal tuberculosis report of two cases and literature review. *Am J Gastroenterol* 1992;87(10):1488-91.
6. Sultan S, Azria F, Bauer P, Abdelnour M, Atienza P. Anoperineal tuberculosis: diagnostic and management considerations in seven cases. *Dis Colon Rectum* 2002;45(3):407-10.
7. Candela F, Serrano P, Arriero JM, Teruel A, Reyes D, Calpena R. Perianal disease of tuberculosis origin: report of a case and review of the literature. *Dis Colon Rectum* 1999;42(1):110-2.
8. Chung CC, Choi CL, Kwok SP, Leung KL, Lau WY, Li AK. Anal and perianal tuberculosis: a report of three cases in 10 years. *J R Coll Surg Edinb* 1997;42(3):189-90.
9. Schmid ML, McKendrick MW, Lobo A, Leach M. A perianal ulcer. *Lancet* 1999;353(9156):894.