



## Case Report

### Masquerading Mycobacterium: Rectal Growth or Tuberculosis?

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**ABSTRACT:** A 37-year old male presented to us with history of lower abdominal pain for 6 months. His physical examination revealed a rectal mass of approximately 1centimeter. He was investigated for possible rectal growth with sigmoidoscopy and biopsy. The histopathological examination (HPE) showed a non-specific chronic inflammation in the tissue from the mass. Another tissue from the mass was sent for polymerase chain reaction (PCR) for tuberculosis, which turned out to be positive. The patient was started on standard anti tubercular (ATT) regimen and responded completely to the treatment. We discuss the patient and review some of the available literature on the topic and discuss the issue of considering a diagnosis of tuberculosis in cases with rectal mass specially when it has become a major public health issue with increasing number of HIV (Human Immunodeficiency Virus) infected patients.

**KEY WORDS:** *Rectal TB; Tuberculosis; Rectal Growth*

#### INTRODUCTION

Tubercle bacilli are known to affect almost every system of the body. The bacillus is known to have existed for a long time evidenced by the fact that *Mycobacterium tuberculosis* (MTB) complex has been identified in the bone of extinct bison who lived on Earth approximately 17,000 years ago<sup>1</sup>. MTB complex has also been detected in 9000-year-old Neolithic settlement in Eastern Mediterranean region<sup>2</sup> and in Egyptian mummies<sup>3</sup>. According to the World Health Organization, one third of the world's population is infected with tuberculosis and 5 to 10% of these people who are not infected with HIV becomes sick or infective with TB at some time of life, while the ones with HIV are more likely to develop TB<sup>4</sup>. Hence diagnosis and treatment of TB is very important because of its concern as a public health issue.

#### CASE DETAILS

Our patient was a 37-year male in good general health who presented with lower abdominal pain and constipation. He had a history of multiple sexual partners and also engaged in receptive anal

intercourse. There were no positive findings in physical examination apart from the presence of a 1 cm rectal nodule in the anterior wall, which was free from underlying structures. Clinically he was suspected to have rectal growth and was subjected to sigmoidoscopy, which showed the presence of a rectal mass just above the anal verge. The sigmoidoscopic (**Figure 1**) impression was that of a rectal carcinoma. We also did a transrectal USG that showed the mass to be confined to rectal mucosa (**Figure 2**). Tissue from the mass was sent for HPE and it showed features of chronic inflammation without any granulomas or caseation. The Ziehl Neelsen stain was negative for the tissues. This prompted us to suspect the rectal mass of being tubercular, since he also had erythrocyte sedimentation rate (ESR) of 65. We took another biopsy from the mass and did a PCR study for tuberculosis, taking all care to prevent contamination. The PCR showed presence of MTB complex.

We failed to detect any other focus of TB as his chest X-ray (**Figure 3**) and abdominal computerized tomogram came out normal. His Mantoux test turned out to be negative indicating his rectal disease could be primary in the backdrop of his negative HIV status. He was started on the standard four drugs ATT regimen for 2 months followed by another 4 months of two drugs. He is

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on constant follow up and the rectal mass completely resolved following medical therapy.



Figure 1: Sigmoidoscopic view of the lesion



Figure 2: Rectal USG showing a mucosal mass M

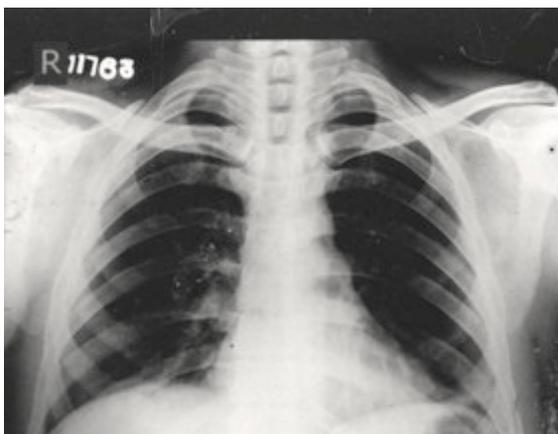


Figure 3: Normal Chest X ray

## DISCUSSION

After going through the literature on intestinal tuberculosis in general and isolated rectal TB in particular, an opinion can be made that as signs and symptoms of intestinal tuberculosis are non-specific and even histology can be misleading, a high index of suspicion is necessary to diagnose such a case<sup>5</sup>. Tuberculosis of colon should be

suspected in cases of chronic abdominal pain and weight loss<sup>6</sup>. Typical findings for colorectal TB have been mentioned as strictures, signs of colitis and polypoidal lesions<sup>7</sup>. In 8 patients of rectal TB the following proctoscopic findings were observed-tight stricture (7), nodularity with ulceration (6), and multiple aphthous ulcers (1)<sup>8</sup>.

However every patient may not have such typical findings and it is important to keep in mind the possibility of the diagnosis whenever one comes across such a patient. At times when repeated endoscopic biopsies are negative, surgical excision of a lesion for complete HPE has to be done to establish the diagnosis<sup>9</sup>. This is more pertinent when one cannot differentiate the lesion from carcinoma.

In order to diagnose a case of isolated rectal TB one has to rely on radiological and pathological findings apart from a detailed clinical examination. The traditional methods of barium study may throw some light, but cannot give a tissue diagnosis. Some cases may not have any conclusive proof of mycobacterial infection since signs and symptoms can be non-specific and histology can be misleading, and thus a therapeutic trial of ATT should be considered in suspected cases<sup>5</sup>. Molecular diagnosis of clinically suspected tubercular fistula in ano has been suggested by polymerase chain reaction method<sup>10</sup>, but the false positive report needs to be considered in places where tubercular infection is common.

## CONCLUSION

It needs to be emphasized that the diagnosis of tubercular etiology of a perianal lesion should be always kept in mind; this is more important because of the higher incidence of tuberculosis in HIV infected population in today's practice. The key to not missing a diagnosis is high index of clinical suspicion coupled with diagnostic testing. However, if the diagnosis is not clear and malignancy is ruled out, there is always a place for therapeutic trial with ATT in cases with high degree of clinical suspicion.

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