

# Pediatric Gastrointestinal Tuberculosis with Hematochezia and Polyarthritits – an unusual Presentation: A case report

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## Abstract:

Tuberculosis may present with variable symptoms and signs, sometimes presentations are unusual. An eight year old boy was admitted with the complaints of low grade fever, weight loss, abdominal pain, hematochezia and polyarthritits. Colonic biopsy was suggestive of tuberculosis and Gene-Xpart of sputum showed of multidrug resistant tuberculosis. We are reporting a case presented with hematochezia and poloyarthritits, an unusual presentation who was subsequently diagnosed as a case of multi drug resistant intestinal tuberculosis.

Key words: Pediatric Gastrointestinal Tuberculosis, hematochezia, Poncet's Disease, MDR-TB.

[BSMMU J 2015 ; 8 (1) : 71-73]

## Introduction:

About 8.8million new cases of tuberculosis (TB) occurred globally in 2010 and 11% occurred in children under 15years of age.<sup>1</sup> About 25-30% of children with TB had extrapulmonary presentation.<sup>2</sup> In extarpulmonary tuberculosis (EPT), abdominal tuberculosis (ATB) is 10% under the age of 10 years.<sup>3</sup>

ATB is thought to develop by hematogenous dissemination from a distant primary focus or via lymphatic spread from diseased lymph nodes or solid organs. The disease can mimic many conditions including inflammatory bowel disease, malignancy and other infectious diseases. Diagnosis is therefore often delayed.

Approximately 10–11% of extrapulmonary TB involves joints and bones, which is approximately 1–3% of all TB cases<sup>4</sup>. Reactive arthritis in TB is known as Poncet's disease, is a rare form of skeletal tuberculosis. Multidrug Resistant (MDR) tuberculosis is a growing global health crisis. Children represent a significant proportion of these cases. We are presenting a case of MDR-ATB presented with hematochezia and polyarthritits.

## Case Summary:

An eight years old boy was admitted with the complaints of low grade intermittent fever and non-migratory polyarthritits for three and half month. There was no history of cough, diarrhoea or ingestion of un-boiled milk or contact with TB patient.

He was moderately pale, severely wasted and severely stunted. BCG mark was present. He had polyarthritits of large joints of both upper and lower limbs. Clinically we diagnosed the patient as polyarticular juvenile idiopathic arthritis. CBC showed moderate anemia with high ESR (110mm/hr). CRP was positive (22.5mg/dl). ANA, Rheumatoid factor, HLA-B27 were negative. Synovial fluid analysis showed hazy appearance and WBC count was 8000/mm<sup>3</sup> (N-40%, L-60%). Protein was 44g/ L and Glucose was 3.9mmol/L.

While investigating the patient, he developed hematochezia two days after admission, 4 to 5 times a day. On enquiry mother gave history of hematochezia for last two and half months off and on with lower abdominal pain. On examination, abdominal finding was normal. Rectal polyp was excluded by rectal examination. Stool R/M/E showed plenty of pus cell and macrophages (++)/HPF). His Tuberculin Skin Test (TST) was 15 mm. X-Ray chest and ultrasonography of whole abdomen was

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normal. In stool AFB was not found. Colonoscopic biopsy was done with the suspicion of inflammatory bowel disease. On colonoscopy examination, multiple discrete aphthoid ulcers in the rectum and all over the colon were identified with normal vascular pattern (Fig-1). Findings were suggestive of colonic TB or Chron’s disease. Histopathology showed granulomatous lesion suggestive of TB. Gene X-part was done from specimen of gastric lavage and showed Mycobacterium Tuberculosis which was concluded as MDR-TB.

is continuing MDR-Anti-TB treatment with regular follow up.

**Discussion:**

TB is a major health problem in many countries and the diagnosis of TB is often challenging in children. TB can mimic wide variety of the disease ranging from benign illness to malignancy.<sup>5</sup> In children diagnosis of TB depends on history of contact,

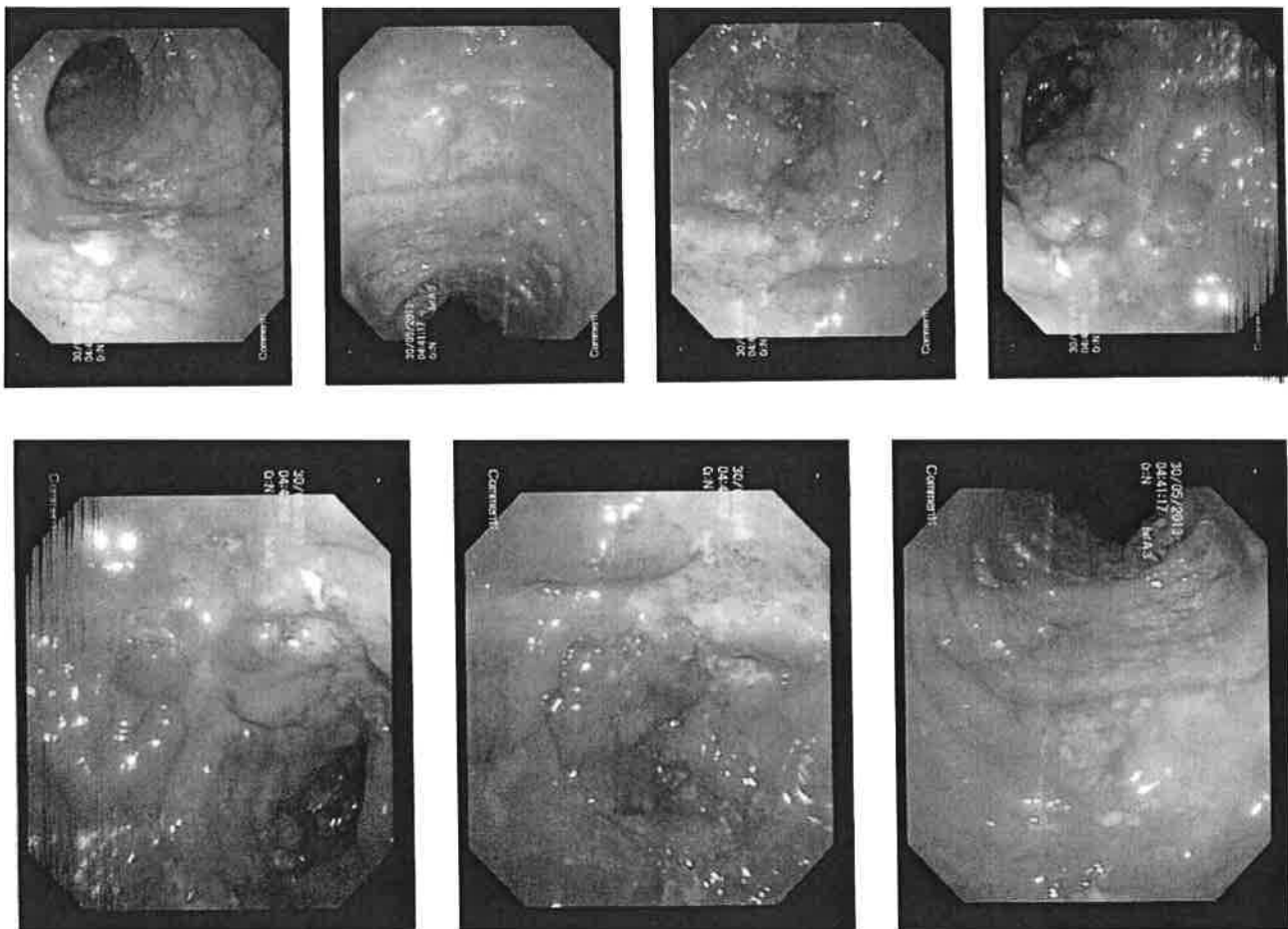


Fig 1: Colonoscopic finding: Multiple discrete aphthoid ulcers (white arrow) seen in the rectum and all over the colon. Vascular pattern (Black arrow) looks normal.

We diagnosed the patient as MDR-TB and treated him with Pyrazinamide, Kanamycin, Cycloserine, Ethionamide and Moxifloxacin for 8 months and Pyrazinamide, Cycloserine, Ethionamide and Moxifloxacin for 12 months along with vitamin B6 and naproxen. After one month patient came for follow up. His well being and appetite was improved, he gained 1.4kg weight within one month and hematochezia was improved. Now the patient

symptoms and signs suggestive of TB, positive TST and suggestive Chest X-Ray.<sup>1</sup> In our patient there was no documentation about history of contact with tuberculosis. History of contact is an important risk factor for development of TB in children especially those of young age acquire the infection within the household. Low grade fever, weight loss and abdominal pain observed in our patient are the common presentation in ITB. Our patient presented with hematochezia and polyarthritiis which were

very unusual presentation in tuberculosis. Rectal polyp, dysentery and IBD are the other differential diagnosis of hematochezia, but we excluded these conditions by per-rectal examination, stool microscopic examination and colonoscopy. Patients present with abdominal tenderness and a mass in the abdomen in 25% to 50% of cases of ITB.<sup>6</sup> Abdominal findings were normal in our patient.

There was involvement of skeletal system in the form of Poncet's disease, a rare aseptic form of arthritis observed in active TB elsewhere. In a study of Poncet's disease showed that 30% of patients had oligoarthritis and the rest had polyarthritis.<sup>7</sup> In our patient, arthritis was polyarticular with involvement of large joints along with active TB in abdomen.

Our patient was vaccinated and MT was positive. It was observed that 82% to 90% of the patients with abdominal tuberculosis were vaccinated.<sup>5</sup> BCG vaccination do not give protection against abdominal tuberculosis.

Ultrasonographic finding in our patient was normal. Colonoscopy examination were suggestive of colonic TB or Chron's disease. Histopathology from the lesion showed granulomatous lesion suggestive of TB. Ulceration, nodule and polypoid lesions were observed in a study done by Laung VKS. They found in their study that 11 patient had granuloma and in 1 patient had caseating necrosis by histopathological examination.<sup>8</sup>

Signs and symptoms of ITB are usually nonspecific and diagnostic tests are not always sensitive as highlighted in the presented case. A high index of suspicion is required for timely diagnosis. A positive PPD but negative chest x-ray is the most common presentation in ITB. Multiple diagnostic tests should be done including endoscopic biopsy.<sup>9</sup>

Gene X-part test was done in our patient where specimen from gastric lavage was positive for *Mycobacterium Tuberculosis* which was concluded as Rifampicin resistant

TB. Study done by Stephen and Alimuddin found that Xpert®MTB/RIF had a sensitivity of 81.3% and specificity of 99.8% in extrapulmonary TB and sensitivity exceeded 78.7% (95% CI; 68–89) in gastric aspirates.<sup>10</sup>

### Conclusion:

Diagnosis of abdominal TB in children is a challenge to clinicians. The clinical manifestations are nonspecific and have varied presentations that may mimic a variety of other abdominal disorders. Investigation findings are also nonspecific. Unless a high index of suspicion, the diagnosis can easily be missed or delayed. Drug resistant TB is a laboratory diagnosis. Gene Xpert is helpful for early diagnosis of MDR-TB.

### References:

1. National Guidelines for the Management of Tuberculosis in Children, 1st edn. National Tuberculosis Control Program, Directorate General of Health Services, Dhaka, Bangladesh, 2012.
2. Jeffrey RS. Tuberculosis (*Mycobacterium tuberculosis*): In: Kliegman RM, Stanton BF, St. Geme JW, Schor NF, Behrman RE (eds). Nelson Text Book of Paediatric. Philadelphia, Saunders, 2012; 996-1011.
3. Aston NO. Abdominal tuberculosis. *World J Surg* 1997; 21:492–9.
4. Schweitzer LC, Lipnharski F, Prezzi SH. Poncet's arthritis: case report. *Rev Bras Reumatol* 2011; 51:388-93.
5. Al-Otaiba A, Almuncef M, Hameed T. An unusual Combination of Extrapulmonary Manifestations of Tuberculosis in Children. *Journal of Infection and Public Health* 2012; 5:203-206.
6. Horvath KD, Whelan RL: Intestinal tuberculosis: return of an old disease. *Am J Gastroenterol* 1998; 93: 692–96.
7. Kroot EJA, Hazes JMW, Colin EM, Dolhain RJEM. Poncet's disease: reactive arthritis accompanying tuberculosis. Two case reports and a review of the literature. *Rheumatology* 2007; 46: 484–9.
8. Leung VKS, Law ST, Lam CW, Luk ISC, Chau TN, Loke TKL. Intestinal tuberculosis in a regional hospital in Hong Kong: a 10-year experience. *Hong Kong Med J* 2006; 12:264-71.
9. Foster BD, Buchberg B, Parekh NK, Mills S. Case of intestinal tuberculosis mimicking Crohn's disease. *Am J Case Rep* 2012; 13: 58-61.
10. Stephen D, Alimuddin IZ. Diagnosis of Extrapulmonary Tuberculosis Using the Xpert® MTB/RIF Assay. *Expert Rev Anti Infect Ther* 2012; 10:631-5.