Perianal Fistulae Caused by *Mycobacterium fortuitum*


**Abstract**

*Mycobacterium fortuitum* is a rapidly growing *Mycobacterium*, which usually colonizes the soil, dust and water. It commonly causes skin and soft tissue infections and is often preceded by trauma. Nosocomial outbreaks from infected water supplies has also been documented. *M. fortuitum* has been reported to cause peritonitis in patients undergoing peritoneal dialysis, central venous line sepsis, arthritis, osteomyelitis, breast abscess, endocarditis and meningitis. We report the first case of perianal fistulae caused by *M. fortuitum*.

**Key Words:** Mycobacterium fortuitum—Perianal fistulae.

*Mycobacterium fortuitum* is a rapidly growing *Mycobacterium* commonly isolated in soil, dust and water. It usually causes skin and subcutaneous infections and is often preceded by trauma. Nosocomial outbreaks from infected water supplies has also been documented. *M. fortuitum* has been reported to cause peritonitis in patients undergoing peritoneal dialysis, central venous line sepsis, arthritis, osteomyelitis, breast abscess, endocarditis and meningitis. We report the first case of perianal abscess due to *M. fortuitum*.

**CASE REPORT**

We present the case of a 30-year-old businessman who had been diagnosed to have psoriasis vulgaris. As the conventional therapy for his dermatological condition had failed, he had started on naturopathy. During the course of this treatment he was subject to daily mud baths and cleansing water enemas. A month after taking this therapy he had sudden onset of blood and mucous diarrhea. He had severe tenesmus and rectal pain one week after onset of symptoms. This was associated with high-grade fever and swelling in the perianal region, which subsequently ruptured to discharge purulent material. In the next month numerous perianal fistulae developed and he became incontinent to feces. He also had arthritis involving the proximal and distal interphalangeal joints and severe back pain. Onycholysis and nail pitting was noted. Diagnosis of psoriatic arthritis was made on clinical grounds. Sacroiliac x-rays were consistent with severe, bilateral sacroilitis. Colonoscopy showed a patulous rectum with friable, erythematous mucosa extending till 25 cm from the anal verge. Multiple internal openings of fistulous tracts were noted. The rest of the colonic mucosa was normal. Segmental biopsies were taken. Rectal biopsy showed inflammatory granulation tissue with a mixed infiltrate consisting of histiocytes, multinucleate giant cells, plasma cells and lymphocytes. No definite granuloma was seen.

In view of the co-existing arthritis, sacroilitis and fistulizing disease possibility of Crohn’s disease was initially considered. The patient was started on Salazopyrine and methotrexate. Pus culture from the perianal abscess grew *Pseudomonas* and he was started on appropriate antibiotics. Steroid therapy was deferred in view of this active infection. A loop colostomy was also done.

However, his condition continued to deteriorate and there was no decrease in the local pus discharge. He had lost 37 kg of weight in the interim period. Empirical antituberculous therapy was started with isoniazid, rifampicin, pyrazinamide and ethambutol in the regular doses. The loop colostomy was converted to an end colostomy, as there was continuing fecal seepage into the distal loop. With the institution of this therapy minimal weight gain was noted and fever abated.

Eight weeks after admission, the mycobacterial culture report from the rectal tissue was obtained. It had shown significant growth of *M. fortuitum*. HIV infection was ruled out by a negative ELISA test. Routine antituberculous therapy was discontinued and the patient was started on clarithromycin, amikacin, ciprofloxacin and cotrimoxazole. After two weeks of starting this combination he showed definite signs of improvement and was discharged from the hospital.

He took Amikacin for three months. Rest of this combination therapy was continued for six months. On review, after six months of therapy, there was complete healing of the perianal fistulae and a weight gain of 15 kg. His serum albumin had gone up from 2.7 g% to 4.2 g%. Repeat colonoscopy was normal and histologic examination showed total resolution of earlier changes seen in the rectum. Rectal and colonic biopsies were sent for mycobacterial cultures and showed no growth. Closure of the colostomy was done without any perioperative complications. The patient was reviewed one year after closure of colostomy weighs 72 kg and has no bowel symptoms.

**DISCUSSION**

*M. fortuitum* is a soil commensal which can cause a variety of suppurative infections. Water contamination can also lead to clinical infection. Our patient was exposed to a combination of both these sources during his “nature cure”! This rapidly growing *Mycobacterium* usually infects skin and soft tissue, but occasionally causes pulmonary, osteoarticular or disseminated disease. Atypical mycobacteria have come into the limelight with the advent of the AIDS epidemic. In HIV infected patients cases of disseminated disease due to *M. fortuitum* has been reported. Culture of mycobacteria is the most specific test for this organism. Polymerase chain reaction has also been used to

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differentiate *M. fortuitum* from *M. tuberculosis* and *M. bovis*.11

Treatment of atypical mycobacteria is frustrating as they respond very poorly to the conventional antituberculous drugs. This is exemplified in our patient as well. The drugs which have been reported to have some efficacy against this organism are amikacin,12 ciprofloxacin,13 cotrimoxazole,14 and clarithromycin.15 As mycobacteria develop resistance with monotherapy, we decided to give a combination therapy, with resultant excellent efficacy. This report shows that *M. fortuitum* can be an unusual cause of perianal fistulizing disease. It also adds on to the compendium of unusual clinical presentations of *M. fortuitum*.

**REFERENCES**