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Medical Imagery

A young boy with disseminated *Mycobacterium avium* complex infection

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ABSTRACT

The case of a Chinese boy with no medical history, who presented with diarrhea and weight loss of 14-month duration and rashes and fever or 6-month duration, is described. The patient was finally diagnosed with disseminated *Mycobacterium avium* complex infection by skin biopsy and tissue culture. This case shows that *Mycobacterium avium* complex infection should be considered even in an immunocompetent patient with diarrhea and skin lesions.

Case report

A 16-year-old Chinese boy was admitted to hospital because of 14 months of diarrhea and weight loss and 6 months of fever and significant indolent skin lesions. The lesions were characterized by papules and nodules, some of which had progressed to to ulcerative lesions and abscesses on the lower limbs (Figure 1A). Laboratory tests revealed nearly normal liver function and blood cell count. A fecal occult blood test, stool culture, and tests for parasites were negative. Ileo-colonoscopy revealed an erythematous and edematous mucosa with granulomas. Biopsies of the left calf skin and intestinal mucosa were positive on acid-fast bacillus staining (Figure 1B). Culture of the biopsy tissues showed positive growth of *Mycobacterium avium* complex (MAC), which was further confirmed by PCR and sequencing. The boy was diagnosed with a disseminated MAC infection and was treated with clarithromycin combined with isoniazid and rifapentine, with gradual improvement (Figure 1C).

Discussion

MAC are environmentally ubiquitous non-tuberculous mycobacteria. Infections with MAC usually cause pulmonary disease, but they can also cause disseminated disease in severely immunocompromised patients, especially in patients with advanced HIV infection (Auguste et al., 2018; Parikh et al., 2017; Loebinger, 2017; Koh and Kwon, 2005). The case presented here was surprising, as the boy developed a disseminated MAC infection with no pulmonary involvement. In addition, the patient was immunocompetent with no past medical history, except for chronic hepatitis B, which was well controlled with entecavir. Hence, it is unknown how he became infected. This case suggests that MAC infection is an important etiology in patients who present with nodular skin lesions, diarrhea, and fever, and patients with MAC infection can have no pulmonary manifestations even in disseminated cases.

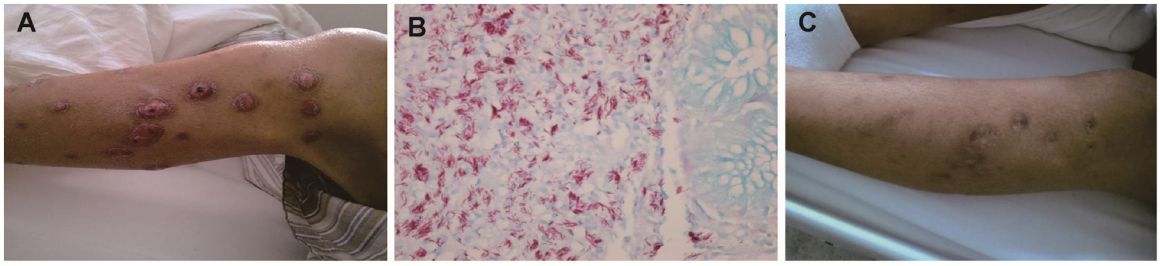

Figure 1. (A) Skin lesions on the lower limb before treatment. (B) Acid-fast bacillus stain of biopsy tissue. (C) Skin lesions on the lower limb after treatment.

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Patient consent

Written informed consent was obtained from the patient.

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None.

Conflict of interest

No conflict of interest to declare.

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