ULTRASONOGRAPHY OF INTRA-ABDOMINAL LYMPHADENOPATHY IN A CHILD WITH PENICILLIOSIS MARNEFFEI

Pannee VISRUTARATNA[1], MD., Virat SIRISANTHANA[2], MD.

ABSTRACT

We report a case of 6-year-old boy with disseminated penicilliosis marneffei. He had hemophilia A and acquired human immunodeficiency virus (HIV) infection from blood transfusion. Ultrasonography showed multiple enlarged mesenteric and retroperitoneal lymph nodes, hepatosplenomegaly without focal lesions, and a small amount of ascites.

INTRODUCTION

Patients with human immunodeficiency virus (HIV) infection are susceptible to a great variety of opportunistic infections, which vary according to geography. In Southeast Asia, *Penicillium marneffei* has been reported as an important pathogen in HIV-associated opportunistic infections[1,2]. Recently, *P. marneffei* infection was reported in Thai children infected with HIV[3]. We describe abdominal ultrasonograms of a boy with disseminated penicilliosis marneffei.

CASE REPORT

A 6-year-old boy had had prolonged fever for 2 weeks. He had been diagnosed as having hemophilia A when he was 4 months old, and had been given cryoprecipitate many times. He was found to be HIV-infected at the age of 3 years and 4 months. His father and his mother were HIV antibody negative. He had had abdominal pain for one day when he came to our hospital. Physical examination revealed hepatosplenomegaly and mild tenderness of the abdomen. His body temperature was 38.6°C. His chest film was normal. Abdominal ultrasonography showed multiple enlarged mesenteric lymph nodes and multiple enlarged retroperitoneal lymph nodes (Figs. 1 and 2). Hepatosplenomegaly without focal mass lesions and a small amount of ascites were also seen. His hemoculture grew *P. marneffei*. His Wright's-stained bone marrow aspiration revealed yeast cells with clear central septation consistent with *P. marneffei*. His fever subsided 4 days after initiation of amphotericin B and repeated hemoculture was negative. During this hospitalization he developed severe gastrointestinal bleeding and went into hypovolemic shock. He expired after his parents did not allow him to undergo further treatment.

[1] Department of Radiology, Faculty of Medicine, Chiang Mai University, Chiang Mai 50200, THAILAND.

[2] Department of Pediatrics, Faculty of Medicine, Chiang Mai University, Chiang Mai 50200, THAILAND.

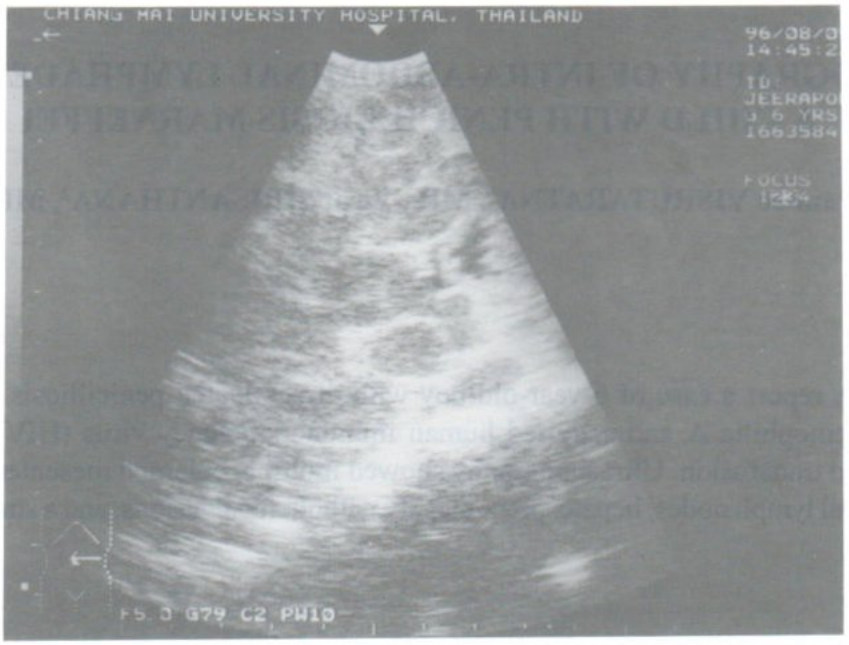

Fig 1. Transverse sonogram of left side abdomen shows multiple enlarged mesenteric lymph nodes.

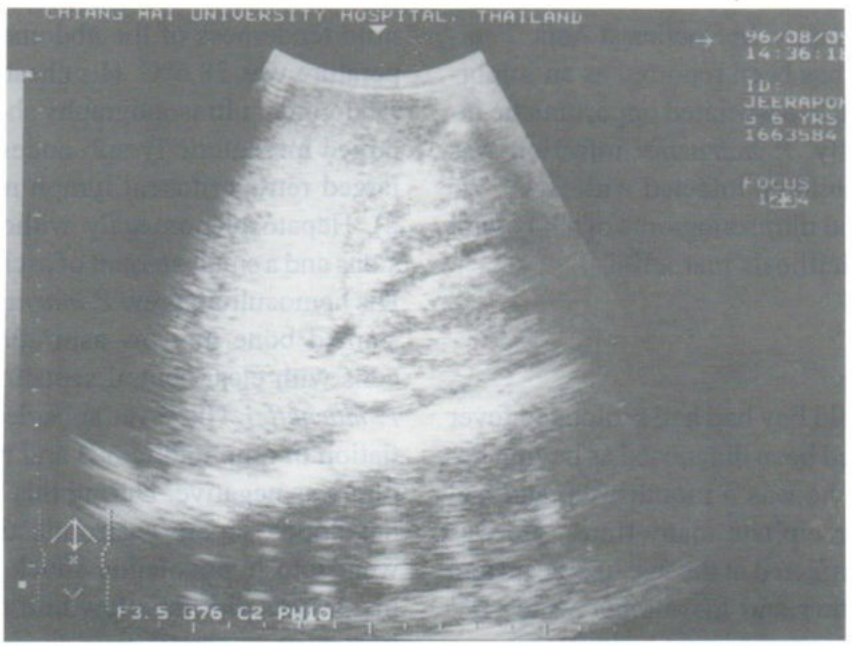

Fig 2. Longitudinal sonogram of mid upper abdomen shows enlarged liver and multiple enlarged mesenteric and retroperitoneal lymph nodes.

DISCUSSION

P. marneffei is a fungus that can cause systemic mycosis in both healthy and immuno-compromised patients. It is endemic in Southeast Asia and the southern part of China.[4] The first person infected naturally by this fungus was a Caucasian minister with Hodgkin's disease in 1973 who had been touring Southeast Asia.[5] After that, cases were reported from Southeast Asia and the southern part of China. In 1988, Peto et al.[6] reported the first case of an HIV-infected patient who had traveled in Southeast Asia and subsequently developed penicilliosis marneffei. Recently, penicilliosis marneffei has been reported in HIV-infected patients who have been living in or traveling through the endemic area.

There have been at least 27 reported cases of P. marneffei in children, 22 of whom were HIV-positive.[2,3,7-9] One 11-year-old boy from Hong Kong had lung, liver, spleen, and kidney involvement.[2] The other 21 cases were from northern Thailand.[3] 90% of these Thai patients had generalized lymphadenopathy, 90% had hepatomegaly, 81% had fever, 67% had papular skin lesions with central umbilication, and 67% had splenomegaly.

P. marneffei tends to involve the reticuloendothelial system. Our experience confirms this. We have seen several HIV-infected children and adults with *P. marneffei* infection who had acute abdominal pain and on laparotomy, they were found to have mesenteric and retroperitoneal lymphadenopathy. To our knowledge there have been no reports of abdominal ultrasonograms of children with penicilliosis marneffei.

If an HIV-infected patient has multiple mesenteric and multiple retroperitoneal lymphadenopathy, one should suspect *M. tuberculosis*, *M. avium-intracellulare*, *H. capsulatum*, or lymphoma. However, if a patient lives in Southeast Asia, one should add *P. marneffei* to the list of pathogens.

REFERENCES

1. Supparatpinyo K, Khamwan C, Baosoung V, Nelson KE, Sirisanthana T. Disseminated *Penicillium marneffei* infection in Southeast Asia. Lancet 1994;344:110-113.
2. Li PCK, Tsui MS, Ma KF. *Penicillium marneffei*: indicator disease for AIDS in South East Asia. AIDS 1992;6:240-241.
3. Sirisanthana V, Sirisanthana T. Disseminated *Penicillium marneffei* infection in human immunodeficiency virus-infected children. Pediatr Infect Dis J, 1995;14:935-940.
4. Deng Z, Ribas JL, Gibson DW, Connor DH. Infections caused by *Penicillium marneffei* in China and Southeast Asia: review of eighteen published cases and report of four more Chinese cases. Rev Infect Dis 1988;10:640-652.
5. DiSalvo AF, Fickling AM, Ajello L. Infection caused by *Penicillium marneffei* - description of first natural infection in man. Am J Clin Pathol 1973;60:259-263.
6. Peto TEA, Bull R, Millard PR. Mackenzie DWR, Campbell CK, Haines ME, Mitchell RG. Systemic mycosis due to *Penicillium marneffei* in a patient with antibody to human immunodeficiency virus. J Infect 1988;16:285-290.
7. Deng Z, Connor DH. Progressive disseminated penicilliosis caused by *Penicillium marneffei*: report of eight cases and differentiation of the causative organism from *Histoplasma capsulatum*. Am J Clin Pathol 1985;84:323-327.
8. Yuen WC, Chan YF, Loke SL, Seto WH, Poon GP, Wong KK. Chronic lymphadenopathy caused by *Penicillium marneffei*: a condition mimicking tuberculous lymphadenopathy. Br J Surg 1986;73:1007-1008.
9. Jayanetra P, Nitiyanant P, Ajello L, et al. Penicilliosis marneffei in Thailand: report of five human cases. Am J Trop Med Hyg 1984;33:637-644.