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Disseminated candidiasis in systemic lupus erythematosus

Sirs,

A 47-year-old female patient was admitted to the hospital because of anorexia, nausea and fatigue. She had been diagnosed as having systemic lupus erythematosus (SLE) 10 years ago when she was pregnant. She was prescribed prednisolone 5-10mg, hydroxychloroquine 200mg for 2 years recently. Total dose of prednisolone was about 6900mg without any other immunosuppressive treatment.

On admission, laboratory test showed WBC 3400/uL (neutrophil 80%, lymphocyte 17.1%), hemoglobin 8.9 g/*dl*, platelets 96000/uL, ESR 39 mm/hr, total protein 4.61 g/*dl*, albumin 2.33 g/*dl*, AST 162 IU/L, ALT 52 IU/L, ALP 166 IU/L (normal value: n.v. 38-94), serum creatinine and electrolytes were within normal; 24-hours proteinuria was 646.8 mg/day. Immunologic studies showed C3 29.5 mg/*dl* (n.v. 88-155), C4 < 10 mg/*dl* (n.v. 13-35), anti-ds DNA 181 IU/mL (n.v. < 7.0), C-reactive protein 82.3 mg/*dl* (n.v. 0-5), anti-nuclear antibody 1:640. There was no evidence of viral hepatitis. On abdominal sonogram, there was hepatomegaly with diffuse increased echogenesity, without any lesions. Initial diagnosis was SLE with increased disease activity. Treatment with prednisolone (1mg/kg/day) was initiated from 2nd hospital day.

On the 14th hospital day, sudden high fever (39.7 ºC), dyspnea, oliguria, tachycardia, hypotension (70/50 mmHg) were developed. Several cultures of the patient's specimen of blood, urine, sputum, and stool revealed no growth of any organisms including fungus. Following abdominal CT scan showed hepatosplenomegaly, decreased enhancement in both kidneys and 2 cm-sized cystic lesion in spleen.

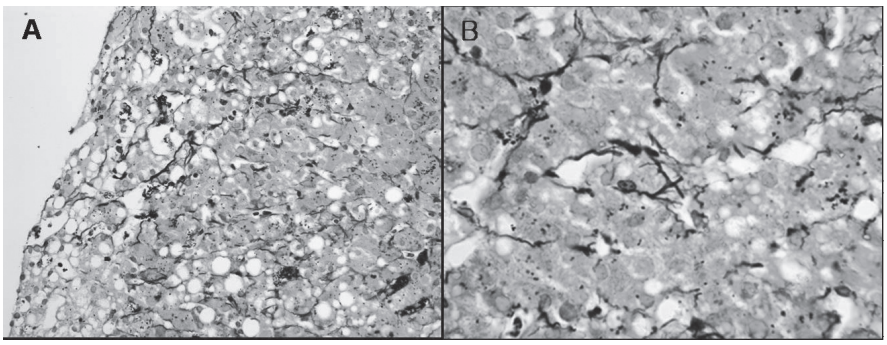

Fig. 1. Light microscopic exam of patient's liver biopsy. Multiple scattered yeasts and pseudohyphae are noted. (Grocott's methenamine silver stain, A: X 100, B: X 400).

Without evidence of other infection or fever focus, liver biopsy was taken for evaluating the reason for hepatic failure on the 20th hospital day. Typical yeast and pseudohyphae were found in the biopsy specimen (Fig. 1), and the diagnosis of hepatosplenic (chronic disseminated) candidiasis was confirmed.

Targeted treatment of chronic disseminated candidiasis was settled with amphotericin B, the total dose of the drug was 593mg, which was switched into liposomal amphotericin B due to renal insufficiency. Clinical features including fever and laboratory findings gradually improved. About 1 month after initiating amphotericin B, therapy has been maintained with oral fluconazole for 6 months.

Infection remains a major cause of morbidity and mortality in SLE (1, 2). Among those, opportunistic infections have been reported in 20% to 30% of patients' mortality (1, 3) and they are often problematic because they can mimic or be superimposed upon active lupus (4).

Chronic disseminated candidiasis (CDC) is seen typically in patients with leukemia who have received cytotoxic chemotherapy (5), but rarely reported in SLE. A combination of studies is often required and repeated examinations are warranted if the studies are negative initially, but the suspicion of CDC remains high. Modern radiologic tools are important in the early identification and management of the syndrome (6), but lesions cannot be detected by US, CT or MRI exam when the patient is neutropenic. Less than 20%-50% of patients with CDC are proven blood culture positive (5). Recent studies suggest that the detection of serum C-reactive protein, serum D-arabinitol (7), and serum beta-D-glucan (8) is useful for early suspicion of CDC. But none of these approaches has yet achieved widespread clinical acceptance and use. Amphotericin B deoxycholate has been the cornerstone of treatment of patients with CDC (9). Fluconazole (10) is an alternative choice for those patients who are stable and need prolonged therapy.

In summary, chronic disseminated candidiasis in SLE is a rare condition which has a very bad prognosis. A high index of suspicion for opportunistic infections like CDC, early and judicious diagnosis including tissue biopsy, and appropriate treatment would improve the prognosis of SLE patients.

S.J. CHOI J.D. JI
Y.H. RHO G.G. SONG
Y.H. LEE

Division of Rheumatology, Department of Internal Medicine, Korea University Medical Center, Seoul, South Korea.

Address correspondence to: Gwan Gyu Song, MD, PhD, Division of Rheumatology, Guro Hospital, Korea University College of Medicine. 97, Guro-Dong Gil, Guro-Gu, Seoul 152-703, South Korea.
E-mail: gsong@kumc.or.kr

Competing interests: none declared.

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