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Invasive Aspergillosis of the Abdominal Aorta with Multiple Peripheral Embolic Lesions

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Invasive aspergillosis is an infection usually found in immune-compromised patients. Aortic invasion by *Aspergillus* spp. has rarely been reported even among immunocompromised patients.[1] In this case, we saw invasive aspergillosis of the abdominal aorta with multiple peripheral aspergillus lesions.

A 28-year-old woman was admitted for bone marrow stem cell transplantation due to severe aplastic anemia. After conditional chemotherapy, she received bone marrow stem cells. The patient was given a prophylactic antibacterial agent (trimethoprim with sulfamethoxazole), an antiviral agent (acyclovir) and an anti-fungal agent (micafungin). However, she had a neutropenic fever, which lasted for about 4 weeks. She was diagnosed with cytomegalovirus (CMV) pneumonia and treated with intravenous ganciclovir. The patient displayed a recurrent fever 4 weeks after the CMV pneumonia, as well as multiple tender, reddish nodular skin lesions on her trunk, legs and soles (Fig. 1). However, the upper part of her body showed no skin lesions. A biopsy of the skin lesions demonstrated an aggregation of fungal hyphae consistent with septic aspergillosis emboli. A serum aspergillus antigen test was positive, and the findings suggested invasive aspergillosis. The patient was treated with intravenous amphotericin B. *Aspergillus flavus* was confirmed with skin lesion culture. To find the septic embolism source, transthoracic echocardiography and computerized tomographic (CT) studies were performed. Transthoracic echocardiography showed no abnormalities suggesting endocarditis. The CT showed a narrowed abdominal aorta with peripheral edema, and splenic infarction (Fig. 2A, B). The

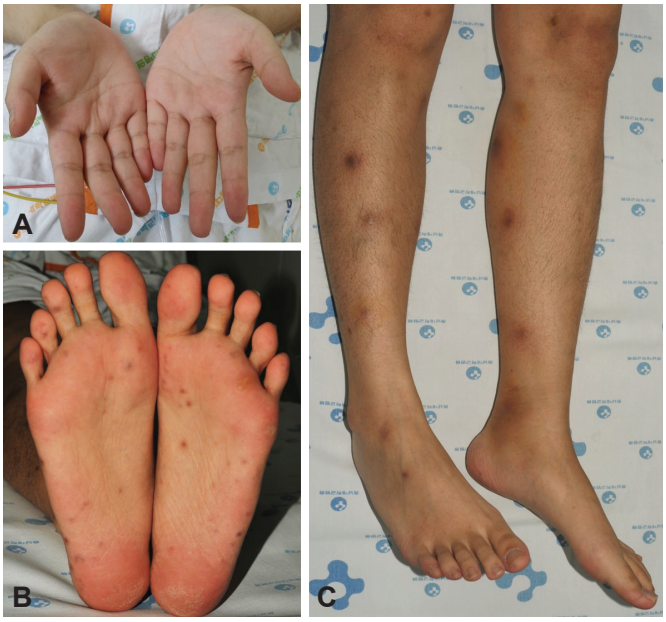

Fig. 1.

narrowing was diffuse and about 6 cm long, with flow acceleration upon ultrasound examination. Velocity was about 3.9 m/sec suggesting a pressure gradient of 61 mmHg (Fig. 2C, D, Supplementary Video 1 in the online-only Data Supplement). Although she was treated with intravenous antifungal agents (amphotericin B and caspofungin) for 7 weeks, the aortic lesion progressed. We wanted to do bypass surgery from her axillary to femoral arteries and remove the diseased

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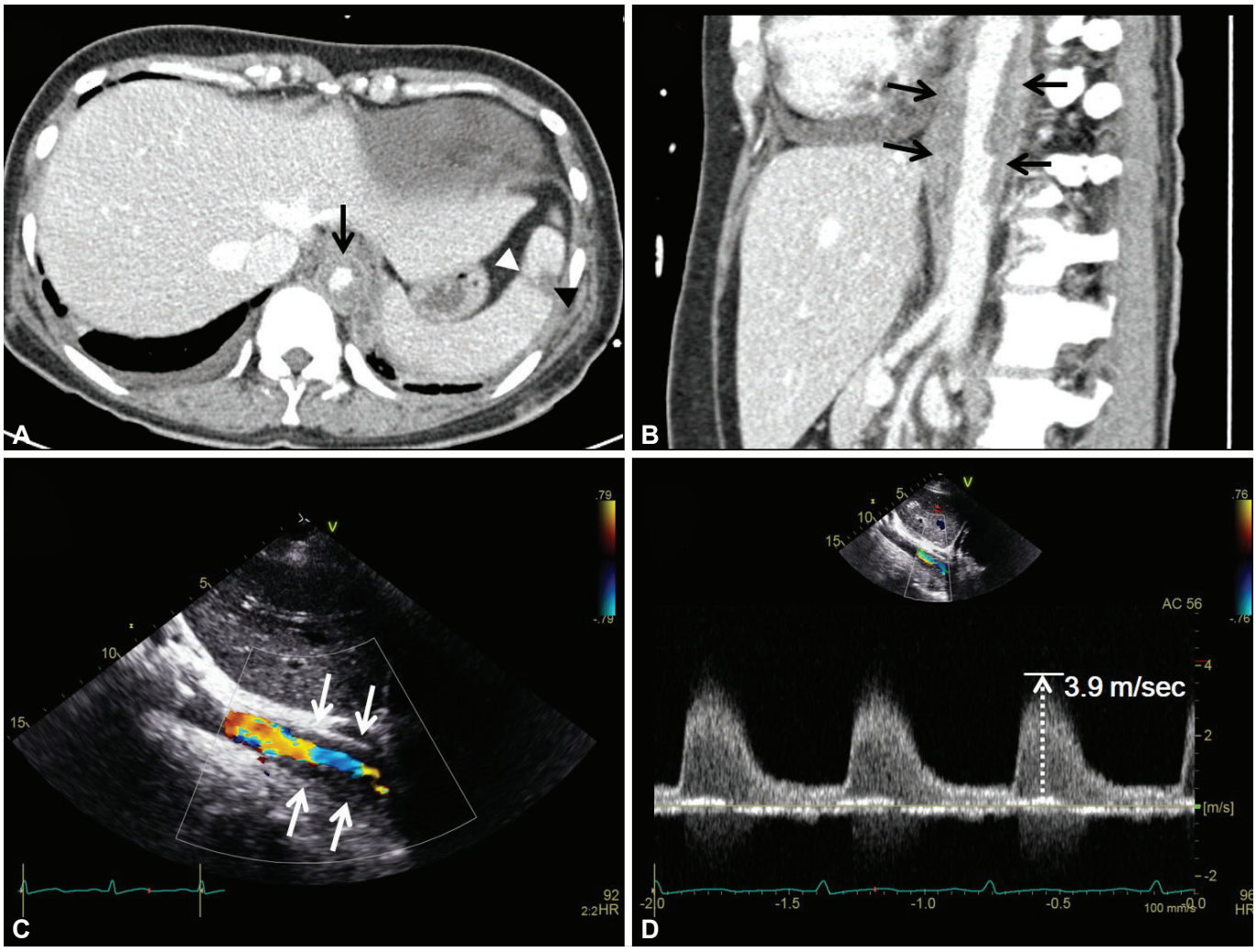

Fig. 2.

aorta to control intractable infection. However, she died suddenly. Although the systemic skin lesions could have originated from the patient's systemic fungemia, the growth of the aortic abscess despite antifungal treatment, coupled with the fact that the skin lesions did not resolve but increased with time, suggested that the aortic lesion might have been the source of the septic emboli in her legs and soles.

In patients with peripheral emboli, the embolic source should be found to reduce further clinical events. The heart is the major source of systemic embolism. In this patient, there was no evidence of embolic events in her upper body including the upper extremities and emboli were found only in the lower extremities. So, in a case with differential embolic events, the abdominal aorta should be examined to exclude it as a potential embolism source. Also, surgical management can be an adjunctive treatment along with appropriate antifungal treatment to reduce further embolic events in patients with definite embolic sources like this patient. However, the removal of the infected abdominal aorta was difficult and her general condition was not suitable for such surgery.

Supplementary Material

The online-only Data Supplement is available with article at https://doi.org/10.4070/kcj.2016.0358.

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