Invasive aspergillosis is one of the serious problems in patients with hematological malignancies. Early diagnosis is very important because of the high mortality. Noninvasive tests, including screening of Aspergillus galactomannan (GM) antigen, (1→3)-β-D-glucan, and Aspergillus DNA, have been studied for early diagnosis to improve the treatment. Although the optimal method has not been clear, among those tests, the double-sandwich enzyme-linked immunosorbent assay for GM (Plateia Aspergillus) was found to be highly sensitive and specific (1, 2). In spite of this finding, false positivity is an important issue. There are several reports of false-positive reactions in patients receiving piperacillin-tazobactam (6, 7), and recent false-negative results were reported for patients receiving amoxicillin-clavulanic acid (AMC) (3, 4).

We report to want a similar case from a cohort of 58 patients with a high risk of febrile neutropenia and underlying hematological malignancies. The patient was a 20-year-old female receiving induction chemotherapy with idarubicin and cytarabine for acute myeloblastic leukemia. She had no evidence of fungal infection clinically or on two consecutive computed tomographies of the thorax during her stay in the wards. However, the serum GM optical density index rose from 0.1 to 4.0 and 4 days later to 9.0. At that period, she was having a diarrhea attack and receiving sulbactam-ampicillin (SAM) for gingival abscess, and so the GM positivity was thought to be related to diarrhea. Five days after SAM was stopped, the GM level dropped to 4.2 and then to 0.5. Due to the recurrence of the abscess, at this time the patient was put on AMC, and on the ninth day the GM level began to rise again, being 3.8 at the highest point and remaining high for 7 days after AMC was stopped. This time, there was no other confounding factor, such as diarrhea.

Amoxicillin and piperacillin are semisynthetic derivatives of ampicillin that are obtained from the genus Penicillium. False positivity of the GM antigen has been published for Penicillium chrysogenum and Penicillium digitatum (5). The cell wall structure of Penicillium could be a possible cause of false-positive Plateia Aspergillus test results in patients receiving Penicillium-derived antibiotics.

In conclusion, we suggest that positive Plateia Aspergillus test results belonging to patients who don’t have evidence of fungal infection clinically should be evaluated carefully, especially for the antibiotics used during the serological screening period. It should be kept in mind that even after discontinuation of the antibiotics, positivity for GM can be seen, depending on the half-life of the drug.

REFERENCES
out any other microbiological or radiological criteria should not be enrolled in clinical trials with antifungal drugs if they are receiving TZP and AMC treatment (2).

In conclusion, as a golden rule, a critical interpretation of laboratory data, a thorough clinical evaluation, and a careful review of concomitant treatments are mandatory to avoid unnecessary antifungal treatment in patients at risk of IA.

REFERENCES


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