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Micafungin
A Viewpoint by Hiroshige Mikamo

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Fungi have been isolated from about 10% of cases of nosocomial infectious diseases. Deep-seated fungal infections have been the likely causative agents in patients with febrile neutropenia, especially those with cancer who are in hospital for long periods. These deep-seated fungal infections are strongly associated with mortality and morbidity in patients and need early diagnosis and treatment. Advances in medical technology and anticancer chemotherapy have prolonged the life of patients, yet the increased occurrence of deep-seated fungal infections in these immunocompromised hosts might be the direct cause of death.

Deep-seated fungal infections include fungaemia, meningitis, respiratory tract infection, gastrointestinal infections, peritonitis, urinary tract infection and chorioamnionitis.[1] Bacterial infections in the field of obstetrics and gynaecology are usually ascending from the vaginal flora, except for appendicitis and tuberculosis. While in fungal infection, especially in fungal peritonitis, there also exists fungal translocation from digestive organs. The main causative organism for fungal peritonitis is *Candida albicans*. Recently, the occurrence of non-albicans candidiasis, such as that caused by *C. glabrata*, *C. tropicalis*, *C. krusei* and *C. parapsilosis*, has increased in fungal peritonitis. *C. glabrata* is a representative species among non-albicans *Candida* species. Fungal peritonitis is usually recognised as a polymicrobial infection involving aerobic and anaerobic pathogens.

Though the gold standard diagnosis method for fungal peritonitis is a microbiological culture test, serological tests as a supplementary diagnosis method are useful. The presence of a high β-D-glucan level in ascites and/or antibacterial chemotherapy resistance might also be useful in the diagnosis of fungal peritonitis.

Useful treatment options against deep-seated fungal infections include fluconazole 200–>400 mg/day, micafungin 50–300 mg/day (in the case of *C. glabrata*, *C. tropicalis*, *C. krusei*) or amphotericin B 0.5–0.7 mg/day (in the case of *C. glabrata*, *C. tropicalis*, *C. krusei*).[2] Actually, pre-emptive therapy, early presumptive therapy or empirical therapy is necessary for deep-seated fungal infections in immunocompromised hosts. However, further clinical trials evaluating the use of micafungin in the treatment of fungal infections are necessary in the surgical field. ▲

References

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