Sinonasal Zygomyces in a Patient with Myelodysplastic Syndrome Following Non-myeloablative Allogeneic Peripheral Blood Stem Cell Transplantation

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Key words: zygomyces, allogeneic stem cell transplantation, sinusitis

(DOI: 10.2169/internalmedicine.46.0069)

A 23-year-old man with myelodysplastic syndrome underwent non-myeloablative allogeneic peripheral blood stem cell transplantation from his one locus mismatched sibling in April 2002. The conditioning regimen included fludarabine, melphalan, and antithymocyte globulin. Tacrolimus and short-term methotrexate were used for prophylaxis against graft-versus-host disease (GVHD). Engraftment was rapid, with neutrophil count of >500/µl on day 12. The post-transplant course was complicated by grade II acute GVHD of the skin and cytomegalovirus antigenemia, with good response to treatments. On day 62, the patient complained of right-sided facial pain. Computed tomography of the sinuses showed right sinusitis (Picture 1). Biopsy specimens from the maxillary sinus revealed broad, nonseptate hyphae consistent with zygomycetes (Picture 2A, B). Fungal culture of the nasal lavage fluid confirmed the presence of zygomycetes. The sinusitis disappeared after combination treatment.
of surgical debridement, amphotericin B, granulocyte-colony stimulating factor, and tapering of immunosuppressive drugs.

Zygomycosis is an aggressive disease and mortality rates remain unacceptably high in patients undergoing hematopoietic transplantation. Early diagnosis and appropriate treatment could improve the survival of these patients.

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