Evolution of Invasive Aspergillosis in Hematopoietic Stem Cell Transplantation

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Abstract

Invasive aspergillosis is still a major complication of allogeneic Hematopoietic Stem Cell Transplantation (HSCT). We describe a case of extensive fungal pneumonia due to Aspergillus spp successfully treated with a combination of antifungal agents and surgery.

Keywords: Aspergillosis; HSCT; Pneumonectomy

In November 2012, a 66-year-old caucasian male underwent an un-manipulated Hematopoietic Stem Cell Transplantation (HSCT) from his haploidentical daughter for a secondary Acute Myeloid Leukemia (AML) in relapse. Because of a single pulmonary nodule (Figure 1A) present before transplant, the patient received Voriconazole as secondary prophylaxis through the transplant. During post-transplantation aplasia, he developed a severe pneumonia with respiratory distress requiring non invasive ventilation support. A chest CT scan (Figure 1B) showed a massive lobar pneumonia with ground glass opacity; a bronchoalveolar lavage was diagnostic for septate hyphae suggestive for Aspergillus and panfungal PCR-assay was concomitantly positive. The patient added liposomal Amphotericin B to Voriconazole; after few days neutrophils engrafted. First bone marrow evaluation

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at 30 days from HSCT demonstrated a complete remission from AML. Clinical conditions slowly improved. A chest CT scan (Figure 1C) showed a consolidation with cavitation of the major lesion. The patient was discharged after two months of combination therapy, on Posaconazole. At six months from HSCT, in continuous AML complete remission, the patient was brought in the operating theatre for left pneumonectomy. The patient is actually alive, in complete remission, with no respiratory distress and normal pulse oximetry in room air, at 18 months from HSCT (Figure 1D).