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Fungal Infections and Myeloma: Supports

Mantar Enfeksiyonları ve Myelom: Destekler

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To the Editor,

The letter entitled "Invasive Aspergillosis and Candidiasis in a Patient with Plasma Cell Myeloma," written by Khadwal et al. [1] and published in a recent issue of your journal, was quite interesting. Here I would like to emphasize some relevant points.

The patient's comorbidities should be known, such as diabetes mellitus, human immunodeficiency virus, immunodeficiency, COPD, or smoking habit. Immunglobulin G kappa anti-CD38 monoclonal antibody treatment has been approved as a monotherapy and, more importantly, in combinations for both first-line and relapsed/refractory myeloma. CD38 monoclonal antibody treatment is generally well tolerated but it seems to be associated with an increased risk of infections [2]. Teh et al. [3] showed a 15% risk of developing an invasive fungal infection after 3 or more lines of treatment and suggested considering opportunities for surveillance and antifungal prophylaxis for high-risk patients. Due to the low rate of invasive fungal infections in patients with myeloma, there is currently no consensus on the role of antifungal prophylaxis. Patients who receive high-dose chemotherapy and develop severe mucositis could require yeast prophylaxis [3]. Bone marrow involvement of aspergillus should be considered due to the cytopenia picture of the patient [4].

In the age of new drugs in myeloma treatment, we should pay attention to the determination of susceptibility to fungal infections.

Keywords: Fungal Infections, Myeloma, Prophylaxis

Anahtar Sözcükler: Mantar enfeksiyonları, Myelom, Profilaksi

Ethics

Informed Consent: Not applicable as no patients were included in this article.

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Reply

To the Editor,

We thank Dr. Yavaşoğlu for his interest in our report titled "Invasive Aspergillosis and Candidiasis in a Patient with Plasma Cell Myeloma" [1]. We appreciate the comments and the valid queries raised regarding that publication. Our patient was a non-smoker but had comorbidities including type 2 diabetes mellitus, hypertension, chronic renal disease, and hypogammaglobulinemia with serum IgG of 364 mg/dL (normal: 658-1837 mg/dL), immunglobulin (Ig)M of <21.0 mg/dL (normal: 40-263 mg/dL), and IgA of 41.0 mg/dL (normal: 71-263 mg/dL). Since her diagnosis 4 years ago of IgG kappa multiple myeloma stage III, the best response to therapy had been very good partial response until she developed the current relapse. It was planned to administer daratumumab in addition to VCD (bortezomib, cyclophosphamide, and dexamethasone) to manage the relapse but that regimen could not be given due to active infections and her poor general condition. It is evident that she had most risk factors predisposing to invasive fungal infections, including steroid usage, diabetes, broad-spectrum antibiotics, hypogammaglobulinemia, two prior lines of chemotherapy, and pre-terminal neutropenia prior to her death during her week-long hospitalization. She was not receiving antifungal prophylaxis. Bone marrow examination performed 3 weeks prior to the final admission had shown 50% plasma cells but no microbial agents were identified at that time. The bone marrow at autopsy revealed small clusters of plasma cells (<5%) with relative depletion of normal hemopoietic elements. No fungal hyphae were identified in the sections.

We agree with Dr. Yavaşoğlu regarding the use of fungal prophylaxis for patients receiving high-dose chemotherapy, commonly given during acute leukemia therapy and hematopoietic stem cell transplantation. While earlier there was no definite consensus for fungal prophylaxis, the International Myeloma Working Group recently published guidelines and recommendations on risk-adapted prophylaxis for infections in multiple myeloma [2]. These suggest bacterial, fungal, and antiviral prophylaxis for intermediate- and high-risk multiple myeloma patients.

In view of the above guidelines, which became available 1 year after the death of our presented patient, antifungal prophylaxis is indicated and should be given to all relapsed/refractory MM patients with underlying risk factors such as diabetes mellitus, renal failure, or hypogammaglobulinemia and those receiving high cumulative doses of steroids during induction as well as the maintenance phase, resulting in a net state of immunosuppression.

Sincerely,

Alka Khadwal, Kirti Gupta, Nabhajit Mallik, Madhurima Sharma, and Pankaj Malhotra

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