Temozolomide-related infections: review of the literature.
Kızılarıslanoglu MC, Aksoy S, Yıldırım NO, Ararat E, Sahin İ, Altundag K.
Department of Internal Medicine, Hacettepe University Faculty of Medicine, Ankara, Turkey.

Abstract
Temozolomide (TMZ) is an alkylating, antineoplastic agent which is being used to treat cases of refractory anaplastic astrocytoma, newly-diagnosed glioblastoma multiforme and metastatic melanoma. TMZ causes lymphopenia and T-cell dysfunction in most of the patients. Related to this toxicity several opportunistic infections have been reported in the literature, but were not well characterized. To further investigate this topic, relevant English language studies were identified through Medline. There were 36 previously reported cases of infection related to TMZ. The median age of the cases was 55 years (range 33-73). The most frequently experienced infections were mucocutaneous candidiasis (n=11; 28.2%), herpes zoster (n=5; 12.8%), herpes simplex virus (n=4; 10.2%), cytomegalovirus (CMV) (n=5; 12.8%), pneumocystis carinii pneumonia (PCP) (n=3; 7.6%), hepatitis B virus (HBV) (n=2; 5.1%) and others (n=9; 23%). Mortality rates were 28.5% (n=4/14) in patients with reported outcome. In this survey, about one third of the TMZ-related severe infections resulted in death. Patients treated with TMZ are at increased risk for opportunistic viral and bacterial infection. Therefore, close monitoring of patients receiving TMZ for opportunistic infections should be carried out.

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