

**O1042 Features of early *Toxoplasma* reactivation after allogeneic haematopoietic stem cell transplantation in a high seroprevalence setting**

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**Background:**

Toxoplasmosis is a rare but life-threatening complication of allogeneic hematopoietic stem-cell transplantation (allo-HSCT). Its prevention relies on prophylactic and/or pre-emptive treatment, but the timing of drug introduction after HSCT and the efficacy of second-line drugs are not consensual. Some HSCT recipients may not be receiving optimal trimethoprim-sulfamethoxazole (TMP-SMZ) prophylaxis due to concerns about myelotoxicity and could be at increased risk of toxoplasmosis.

**Materials/methods:**

All *Toxoplasma*-seropositive allo-HSCT recipients over a four-year period in a Parisian hospital were retrospectively evaluated and followed for 6 months after HSCT. Prevention of *Toxoplasma* disease in our institution consists in prophylaxis for all *Toxoplasma*-seropositive allo-HSCT recipients, in addition to weekly monitoring of peripheral parasitemia up to 6 months after transplantation. We evaluated the use of prophylactic drugs for all patients at days 30, 90, and 180, reviewed medical records and outcomes of patients with at least one reactivation event, and evaluated risk factors associated with *Toxoplasma* reactivation.

**Results:**

We included 138 *Toxoplasma*-seropositive allo-HSCT recipients over a 4-year study period. Prophylaxis consisted in the use of TMP-SMZ in 50.8%, 52.7% and 51% of patients at days 30, 90, and 180 respectively. All but 4 of the remaining patients were receiving oral atovaquone. Sixteen patients (11.6%) experienced at least one *Toxoplasma* reactivation event (*Toxoplasma* infection, n=9, or *Toxoplasma* disease, n=7), 56% of which occurred before day 30. Seven (41%) were receiving either TMP-SMZ (n=1) or atovaquone (n=6) prophylaxis at the time of reactivation. For the nine patients experiencing *Toxoplasma* infection, outcomes after pre-emptive treatment were favorable in all cases. Seven patients experienced *Toxoplasma* disease, including 6 with probable neurological disease and one with probable pulmonary disease. *Toxoplasma* parasitemia preceded the diagnosis of *Toxoplasma* disease in only 3 cases (42.8%). Overall 6-month survival after *Toxoplasma* disease was 57%. There was a trend towards higher risk of reactivation in allografts from haploidentical donors (HR=2.59, 95CI:0.96-6.95, p=0.059).

**Conclusions:**

A significant number of at-risk allo-HSCT recipients may be receiving sub-optimal prophylaxis regimens. Cases of

early reactivation and breakthrough toxoplasmosis despite prophylaxis illustrate the limitations of currently-used prevention strategies.

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