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Poster Session V

Infections in transplant recipients

IS SOLID-ORGAN TRANSPLANTATION A RISK FACTOR FOR SEVERE MALARIA?

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Objectives: Malaria is a parasitic infection caused by *Plasmodium* species that is associated with significant morbidity and mortality in endemic areas or as a travel-related infection. In solid-organ transplant (SOT) recipients, malaria may additionally be transmitted by the allograft. Few data are available on the clinical significance of malaria in SOT recipients, particularly for donor-derived infection (DDI).

Methods: We analysed all cases reported in the literature of malaria in SOT recipients from 1968 to 2013. Standard criteria were used for definition of DDI and severe malaria. A search strategy was adopted in PubMed using the MeSH terms « malaria », « organ transplantation », « kidney transplantation », « liver transplantation » « heart transplantation », « lung transplantation », and « pancreas transplantation ».

Results: We excluded 4 articles because of a lack of clinical information of the malaria cases. Overall 25 articles including 49 cases of malaria in SOT recipients were reviewed (kidney n=37, liver n=9, heart n=3). Most recipients were from Europe (25/49, 51%) and most donors were from India Subcontinent (19/49, 39%) or Africa (17/49, 35%). *P. falciparum* and *P. vivax* were the most common species found (55% and 29%, respectively). Median parasitemia (n=13) was 5% (IQR 1.2-10.1), and 22/49 (45%) of patients had at least one criteria for severe malaria. Only one patient was reported to be treated with exchange transfusion. Overall mortality was 8/49 (16%); all deaths were caused by *P. falciparum*, except for one case of *P. vivax*. 34/49 (69%) patients fulfilled the criteria for DDI; patients with DDI were older (p=0.02) and malaria manifested earlier after transplant (11.5 vs. 39 days, p=0.001) than patients without DDI. However, there were no differences between DDI and non-DDI malaria in terms of frequency of *P. falciparum* (53% vs. 60%, p=0.75), parasitemia (5.5 % vs. 2%, p=0.30), criteria for severe malaria (44% vs. 47%, p=1.0) and mortality (17.6% vs. 13.3%, p=1.0).

Conclusion: Despite a potential reporting bias towards publication of more severe cases of malaria, our analysis suggest that malaria in SOT recipients is characterized by increased severity and high mortality. We did not find important differences of clinical manifestations of malaria according to the mode of transmission. Prospective studies would be needed to further analyze the clinical features and significance of malaria in SOT recipients.