Toxoplasmosis

Contents

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Condition

Toxoplasmosis is a parasitic disease with worldwide distribution. It is caused by the protozoan, Toxoplasma gondii. Though the majority of primary toxoplasmosis infections are asymptomatic, severe cases can present as acute systemic infections [1]. Recently acquired toxoplasmosis or reactivated infections can also present as ocular disease (i.e. posterior uveitis). Immunocompromised individuals are at higher risk for reactivation of a latent infection. Thus, it is more common for reactivation of toxoplasmosis in a seropositive recipient than a donor-transmitted infection [2].

Individual at risk

Recipient

Guidance at RECRUITMENT

ACCEPTABLE if entirely free of symptoms. Defer for donor safety if chronic infection or if clinical manifestation includes ocular disease (i.e. posterior uveitis).

Guidance at CT

ACCEPTABLE if entirely free of symptoms. Defer for donor safety if chronic infection or if clinical manifestation includes ocular disease (i.e. posterior uveitis).

Guidance at WORK-UP

Recommended work-up testing

In countries where all donors must be tested for toxoplasmosis, it is recommended to follow local guidelines / regulation.

Toxoplasmosis-IgM and IgG

Testing outcomes and recommendations

1) Toxoplasmosis IgM = negative AND Toxoplasmosis IgG = positive or negative

Donor can be cleared

2) Toxoplasmosis IgM = positive AND Toxoplasmosis IgG = positive

Avidity testing should be performed to measure the binding strength of specific antibodies to toxoplasmosis antigens. This allows estimation of the time point of primary infection as well as to distinguish between acute and chronic infection.

Toxoplasmosis NAT-testing (PCR) from donor peripheral blood is not relevant, since negative PCR does not exclude relevant infection/parasitemia.

The transplant centre should be informed and clearance or deferral may be appropriate according to avidity test

2) Toxoplasmosis IgM = positive AND Toxoplasmosis IgG = negative

Further laboratory testing is necessary (e.g. Immunoblot/ISAGA) to verify if result is due to acute infection or non-specific binding.

No clearance should be given until clarification is obtained.

Justification for guidance

Toxoplasmosis is a recognised complication of immuno-suppression post-transplant.

References

APA Recommendations of the Center for International Blood and Marrow Transplant Research (CIBMTR®), the National Marrow Donor Program (NMDP), the European Blood and Marrow Transplant Group (EBMT), the American Society of Blood and Marrow Transplantation (ASBMT), the Canadian Blood and Marrow Transplant Group (CBMTG), the Infectious Disease Society of America (IDSA), the Society for Healthcare Epidemiology of America (SHEA), the Association of Medical Microbiology and Infectious Diseases Canada (AMMI), and the Centers for Disease Control and Prevention (CDC), Tomblyn, M., Chiller, T., Einsele, H., Gress, R., Sepkowitz, K., … Boeckh, M. A. (2009). Guidelines for Preventing Infectious Complications among Hematopoietic Cell Transplant Recipients: A Global Perspective. Biology of Blood and Marrow Transplantation: Journal of the American Society for Blood and Marrow Transplantation, 15(10), 1143–1238. doi:10.1016/j.bbmt.2009.06.019 [1]

[1]. Garweg, J.G., Peterson, E. (2020). Toxoplasmosis: Ocular disease. UpToDate. Retrieved October 18, 2023, from https://www.uptodate.com/contents/toxoplasmosis-ocular-disease?search=toxoplasmosis&source=search_result&selectedTitle=5~150&usage_type=default&display_rank=5#references

[2.] Khurana, S., & Batra, N. (2016). Toxoplasmosis in organ transplant recipients: Evaluation, implication, and prevention. Tropical parasitology, 6(2), 123–128. https://doi.org/10.4103/2229-5070.190814

Notes

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Version	Published	Changed By	Comment
CURRENT (v. 3)	**Apr 26, 2024 17:16**	**Eefke van Eerden**	Updated condition information and references
v. 2	Mar 28, 2018 14:04	**Former WMDA staff member (admin)**	
v. 1	Mar 28, 2018 14:00	**Former WMDA staff member (admin)**	