

Seroprevalence of toxoplasma gondii infection: An umbrella review of updated systematic reviews and meta-analyses

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Abstract

Objectives: Toxoplasmosis is one of the neglected parasitic disease in humans and animals that produced via toxoplasma gondii. This study we implemented an umbrella review of all existing systematic reviews, meta-analyzing studies to apprise, and summarize seroprevalence of human toxoplasmosis in worldwide.

Methods:

The search was carried out in databases including: Pub Med, Google Scholar, Science Direct, Scopus, Web of Science, Cochrane, and global health from their start dates until December 2018 in Persian and English language. A total of 21 systematics review and meta-analysis met the inclusion criteria of umbrella review. The Q test and the I^2 statistic were used to evaluate heterogeneities. Quality assessment were performed and made use of the AMSTAR tool.

Results:

The estimated pooled seroprevalence of T. gondii infection in blood donors, Immunocompromised patients, childbearing age women, general population, newborns and children, pregnant women and overall was 33% (95% CI, 29.0–38.0%), 42.0% (95 CI, 34.0–49.0%), 32.0% (CI, 26.0–38.0%), 42.0% (CI, 38.0–45.0%), 4.0% (CI, 2.0–5.0%), 40.0% (CI,37.0–44.0%), and 36% (CI, 24.0–48.0%), respectively.

Conclusion:

The results of our umbrella review show a higher seroprevalence of T. gondii infection in immunocompromised patients, general population, pregnant women, blood donors, childbearing age women, and newborn groups, respectively. Routine serologic screening test and health education by primary care physicians for Toxoplasmosis is recommended to be conducted in high-risk groups in the endemic region.

Keywords: Meta-analysis, prevalence, review, toxoplasma gondii, toxoplasmosis