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Seroprevalence of *Toxoplasma gondii* IgG and IgM antibodies and associated risk factors among tuberculosis patients at the Bamenda Regional Hospital, North west, Cameroon

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Background: Toxoplasmosis is a zoonotic disease with a worldwide distribution amongst warm-blooded animals and can affect anyone in contact with the parasitic oocysts or tissue cysts. Tuberculosis (TB) and *T. gondii* co-infection is a serious public health problem to the health of these patients in developing countries. We determined the seroprevalence of *Toxoplasma gondii* IgG and IgM antibodies and associated risk factors among newly diagnosed sputum positive pulmonary TB patients.

Materials & Methods: This was a cross sectional study carried out in referral TB management clinics. Clinicians carried out screening of 147 diagnosed pulmonary TB patients between October 2015 and April 2016. Laboratory analyses included screening of toxoplasmosis based on quantification of anti-*T. gondii* IgM and IgG antibodies test using sandwich ELISA. A questionnaire captured known risk factors for toxoplasmosis among all participants. Risk factors for toxoplasmosis were analyzed in a binary logistic model in which not being positive to toxoplasmosis was considered the reference condition. The results presented as odds ratios were used to assess association between occurrence of toxoplasmosis and potential risk factors. A p-value <0.05 was considered statistically significant.

Result: Of the 147 patients who accepted to participate in the study, 83.00% [122/147] were seropositive for *Toxoplasma gondii* IgM and IgG antibodies. No significant gender difference was found between males 84.21% [64/76] and females 81.69%, [58/71] [OR=1.20, 95% CI=0.35-1.98, p=0.68]. The highest seropositive were recorded in the 41-60 age group with 90.70% [39/43]. We noted a threefold increase in the risk of toxoplasmosis among TB patients having farming as occupation.

Conclusion: The prevalence of toxoplasmosis IgM and IgG antibodies among sputum positive pulmonary TB patients in north west Cameroon was found to be 83.00%. The principal risk factor associated with *Toxoplasma gondii* among TB patients was being a farmer.

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