

## Toxoplasmosis In Women With Adverse Pregnancy Outcomes: A Single Centre Case Control Study

06 Nov.

MHS40

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Toxoplasmosis is caused by the tissue protozoan parasite *Toxoplasma gondii* which infects a range of warm\_blooded animals in addition to humans. Toxoplasmosis is widespread across the globe. The women who become primarily infected with *T. gondii* during the pregnancy may transmit the disease to the foetus. This study aims to investigate the role of maternal seropositivity of toxoplasmosis in miscarriage or stillbirth, among pregnant woman. This unmatched case-control study, was conducted from March to August 2019. Women with miscarriages, presenting to the professorial Gynaecology and Obstetrics unit, Teaching Hospital, Anuradhapura, were considered as cases, and immediate post-partum mothers who delivered healthy babies were the controls. Basic demographic data were gathered using an interviewer\_administered questionnaire and the serological status was assessed using anti-toxoplasma IgM/IgG rapid diagnostic lateral-flow assay. There were 116 cases and 102 controls, with the average ages of 29.5 years (SD =  $\pm 6.0$ ) and 28.5 years (SD =  $\pm 5.0$ ) respectively. Average POA of controls at the delivery was 38.8 (SD =  $\pm 1.3$ ) weeks, while the average POA at the time of miscarriage of cases was 12.2 (SD =  $\pm 5.2$ ) weeks. Majority of the miscarriages occurred during the first trimester (n = 62, 53.4%). Of the cases 19 (16.4%) were positive for IgG against *T. gondii* and 19 (18.6%) of the controls were also positive for toxoplasma IgG. There was no any significant association between the past maternal exposure to *T. gondii* and miscarriages (OR, 0.86(95%CI: 0.4-1.7). However, one of the toxoplasma IgG positive cases was also positive for toxoplasma IgM, indicating the presence of acute toxoplasmosis. Association between adverse pregnancy outcomes and the past exposure to *T. gondii* is not significant, however the potential impact of acute infections need to be further explored.

**Keywords:** Toxoplasmosis, *Toxoplasma gondii*, Pregnancy, Miscarriages