Soluble *Toxoplasma gondii* antigen avaliation of human extravillous trophoblastic cells (HTR-8/SVneo) endoreduplication process.

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Toxoplasma gondii is an obligate intracellular protozoan parasite able to infect many vertebrates, including the humans. In the vertical transmission of toxoplasmosis, the parasite overcomes the placental barrier and may cause severe consequences to the fetus, such central nervous system complications, ocular toxoplasmosis or even miscarriage. Placenta, essential for pregnancy, provides nutrients to the embryo and favors conditions for implantation. During this process, events such as invasion and migration of extravillous trophoblast cells are essential to induce placentation and pregnancy success. The control of these cells migrations is regulated by intrinsic mechanisms such as genetic material endoreduplication. Thus, inadequate migration and invasion of extravillous trophoblast cells are associated with pregnancy disorders. Thus, this study aimed to evaluate if antigen soluble *Toxoplasma gondii* (STAg) could influence in the migration and endoreduplication processes of HTR-8/SVneo extravillous trophoblast cells. Initially, HTR-8/SVneo cells were cultured in RPMI 1640, supplemented with 10% fetal bovine serum and antibiotics. The cells were plated and treated or not with STAg by 72h. Endoreduplication and metalloproteinase were evaluated using the Western Blotting technique by p57 and MMP-9 protein expression, respectively. Extravillous trophoblast cells HTR-8/SVneo treated with STAg increased p57 protein intracellular expression in trophoblast cells treated compared to untreated cells. It was also observed an decrease in the expression of MMP- 9 of these cells when compared to the control group. STAg influences in the p57 protein expression and the increase in this protein levels rise the endoreduplication processes and either the number of giant cells, disfavoring the invasiveness and migrativeness of extravillous trophoblast cells by MMP-9.

Keywords: p57, Soluble antigen of Toxoplasma gondii, HTR-8/SVneo cells

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