

# Genetic characterization of *Toxoplasma gondii* isolates from human spontaneous aborted fetuses in Jahrom, southern Iran

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*Toxoplasma gondii* (*T. gondii*) is an intracellular protozoan that infects the fetus through the placenta and leads to severe complications in the fetus. One of the complications of congenital toxoplasmosis is spontaneous abortion. The prevalence of toxoplasmosis infection was investigated among spontaneously aborted fetuses (SAFs), and the genotypes of parasite isolates were determined in the present study. Placentas from 330 samples of SAFs were collected in Jahrom (Fars province) from February to September 2018. DNA was extracted from each placental tissue. The *T. gondii* infection was detected using nested polymerase chain reaction (Nested-PCR) assay based on a 529 bp repeat element (RE) gene. Afterward, *Toxoplasma* was genotyped using PCR-restriction fragment length polymorphism (PCR-RFLP) based on the GRA6 gene. The frequency of *T. gondii* infection was found to be 14.5% (48 out of 330 samples). Genotyping of nine *T. gondii* isolates revealed that all belonged to genotype II. Statistically, the prevalence of *T. gondii* infection was significantly correlated with the education levels of the mothers and the age of the fetus ( $P < 0.05$ ). The lowest prevalence of *Toxoplasma* infection belonged to mothers with university education and the highest frequency of infection was observed among the fetuses in the age group of 8–9 weeks. The findings of the present study suggest a significant role for toxoplasmosis in SAFs in Jahrom city.

**Keywords:** *Toxoplasma gondii*, Fetus, Placenta, Genotype, Iran