EVALUATION OF THE OVICIDAL POTENTIAL OF QUERCETIN IN MANSONI SCHISTOSOMIASIS IN A MURINE MODEL

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Schistosomiasis is a neglected and endemic disease in Brazil. The only drug used for treatment is praziquantel, and the lack of alternative therapeutic options has raised concerns within the scientific community due to the potential emergence of worm resistance, as this drug acts only against the adult worm. Quercetin is a natural polyphenolic flavonoid with low toxicity, possessing antioxidant, anti-inflammatory, and immunomodulatory activities, as well as in vitro antiparasitic action. The objective of this study was to evaluate the ovicidal potential of quercetin administered during the juvenile stage of Schistosoma mansoni in a murine model, analyzing the effects on eggs after 55 days of infection. This was an in vivo experimental study conducted with 39 male albino Swiss Webster mice, experimentally infected with Schistosoma mansoni. Quercetin was administered via gavage at the following doses: 800 mg/kg, 1600 mg/kg, and 2400 mg/kg, with treatments performed according to the infection days: 5th and 15th days post-infection or 10th to 14th days post-infection. Feces collection was performed after 55 days of infection, and egg counting was conducted using the Kato-Katz method. Results were expressed as median and 25th and 75th percentiles of the egg count in the feces across the different groups. In statistical model 1, which compared the infected control group to the treated groups, no statistically significant difference was observed. Similarly, statistical model 2, which evaluated the different quercetin concentrations and treatment durations, also did not indicate any statistical difference. The results obtained in this study suggest that quercetin, at the doses used, does not possess ovicidal activity against S. mansoni when administered during the juvenile stage of the parasite.

Keywords: Schistosomiasis; Schistosoma mansoni; Quercetin.

Supported By: FACEPE