

Anti-trichomonas effect of *Rheum ribes* and *Foeniculum vulgare* extracts on *Trichomonas vaginalis* invitro

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Abstract:

Background and Purpose: Trichomoniasis is the most common infection of urogenital tract. This infection is due to the presence of *Trichomonas vaginalis* a flagellate protozoan parasite. The drug of choice for treatment of Trichomoniasis is metronidazole and tinidazole, however carcinogenic and teratogenic effects and parasite resistance to metronidazole is reported. With respect to cytotoxic effects of herbal medicine drugs such as *Rheum ribes* and *Foeniculum vulgare* on microorganisms and to determine the effect these herbal medicine against *Trichomonas vaginalis* the present study conducted to introduce an effective herbal medicine.

Material and methods: This study was an experimental research. Hydroalcoholic extract of *Rheum ribes* flower (100-300 µg/ml) and aqueous extract of seed (75-800 µg/ml) were prepared. TYI-S-33 medium was obtained for cultivation of *Trichomonas vaginalis*. After achieving the number of *T. vaginalis* (1×10^6) various concentrations of extracts were treated with parasites. The minimum inhibitory concentration (MIC) on positive (metronidazole) and negative control was calculated. Data were then analyzed using SPSS software by repeated measures.

Results: The percent of growth inhibition of *Rheum ribes* was 97.8 and 100% after 24 and 48 hours of incubation with *T. vaginalis* at 300 µg/ml concentration, The percent of growth inhibition of *Foeniculum vulgare* were also evaluated. The results showed that the percent of growth inhibition at 800 µg /ml, after 24 h was 76% and after 48h it was evaluated as 79.4%.

Conclusion: It seems that anti-*Trichomonas* activity of hydroalcoholic extract of *Rheum ribes* was higher than *Foeniculum vulgare*. Further studies are needed in order to isolate the effective component of *Rheum ribes* and also in vivo researches in human.

Keywords: *Trichomonas vaginalis*, *Foeniculum vulgare*, *Rheum ribes*, Invitro.

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