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In Vitro Drug Sensitivity of Trypanosoma evansi Bangkalan Isolates

Abstract

Only a limited number of drugs is available for Trypanosoma infection treatment. In Indonesia there are two chemoterapeutics (isometamidium and diminazene) used for treatment. The isometamidium does not act as a trypanocide of Indonesia isolates. However, the clinical action of diminazene to Trypanosoma has not been reported yet. The objective of this research was to obtain trypanocide concentration of Trypanosoma evansi Indonesia isolates by in vitro test. Drug sensitivities of Trypanosoma evansi Bangkalan isolates modified using Minimum Eagle Medium and HEPES medium were measured for diminazene aceturate and suramin using in vitro incorporation test. In control group, trypanosome inoculate was added as a placebo substance in microtiter plate containing trypanosomes. Bloodstream forms were isolated from Wistar strain Rattus norvegicus, incubated at room temperature in serial drug dilutions in a microtiter plate by adding 5 % of CO2. After 24 hours, the trypanosomes were counted by inverted microscope to determine trypanocide action. The two subjects research were different trypanocide action (p<0.05). The minimum concentration with trypanocide action of diminazene aceturate was found to be 8.480 μg.ml(-1). The minimum concentration with trypanocide action of suramin was 6.600 μg.ml(-1).

Keyword : diminazene, aceturate, suramin, Trypanosoma,

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