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THE EFFECT OF VARIOS CHEMICALS AND TEMPERATURE IN CESTRUCATION OF THE EGGS OF ASCARIS LUMBRICOIDES: A PROGRESS REPORT

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Abstract:

Infestation of soil and night-soil with the eggs or larvae of soil-transmitted helminthes is very important factor in the transmission of these infections. The effect of various temperatures and different chemicals on the development of larva inside the eggs of Ascaris, which is the most resistant eggs or larvae of helminthes, or destruction of developed larvae inside the eggs has been evaluated by infecting white mice or by direct observations. In eggs with developed larva, temperature of 600C for one hour kills all larvae while in lower temperature, 40% or more larvae are still alive. In a temperature of 600C for 15 and 20 minutes no larvae is found in the liver of mice. Of levamisole, thiabendazole, mebendazole, sodium-nitrite and calcium superphosphate, thiabendazole and mebendazole have higher effect in destruction of eggs. In eggs with undeveloped larva, it was shown that in a temperature of 600C for 15 minutes or more, development of larva does not take place, while in lower temperature development of larva in some eggs takes place. In a temperature of 700C for 10 minutes no development of larva has been observed. Evaluation of the effect of levamisole, thiabendazole, mebendazole, urea, iodine and potassium dichromate has shown that mebendazole with a concentration of 1/100,000 or more inhibit the development of larvae. Other chemicals have some effects on the development of larvae. Results of previous investigations have shown that although many chemicals are effective in the laboratory conditions, they are not very effective when used in the field. Therefore, more studies on this subject in the field are necessary, in order to find application of this control method.

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