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Some contributions to the problem of the epidemic process. 2nd report. Basic laws governing the transmission of infectious diseases by parasitic Arthropods (insects and ticks)(Summary only).

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1. The localization of the agent in the blood of an organism of a warm-blooded host, multiplication (in certain cases the elapsing of a determined cycle of development) and a lengthy retainment of the pathogenic parasite in the organism of the arthropodic vectors are necessary conditions for the existance of an infection which is transmitted by blood-sucking, specific vectors.

2. The transmission of the agents of infectious diseases by blood-sucking arthropodic vectors ordinarily has a strict specific character, stipulated by it species biological and ecological peculiarities.

3. A group of winged bloodsucking specific vectors are able to contact diseases of tropic and subtropic countries (an exception is malaria, the agent of which adapted itself to a lengthy inhabitation of the human organism, which also stipulates an expansive dissemination of this infection not only in the tropic and subtropic belts, but also in countries of temperate climates). An important epidemiological peculiarity of the dissemination of infections by winged vectors is the great extent of the process of transmission in regard to distance, which immensely hinders, and in many cases, makes it impossible to determine the immediate tie between one disease and another. The flying vectors, during a day of massive winging and the appearance of activity, are capable of accomplishing an immensely expansive dissemination of the infection.

4. The transmission of an agent of any disease by ticks is characterized by an extensively great time period and an insignificant expanse of its territory. Substanial variation of the ecology of the basic family of ticks (Ixodes and Argas) are connected with the complementary epidemiological and epizootological variations of the infections transmitted by them.

5. The peculiarities of transmitting an infectious disease through fleas are their close contact with the source of infection, as a result of which the transmission of the pathogenic parasites is realized ordinarily during a respectively close contact of the non-infected individual with the infected.

6. An exception among the blood sucking specific vectors of the agents of infectious diseases is the clothes louse, which, while a strict settler as an ectoparasite of man, at the same time, thanks to its inhabitation of wardrobes and linens, comparatively directly transfers from one human to another, which insures a more or less regularity of character of transmission of such infections as typhus and recurrent fever.