Nonspecific prevention in conditions of high-mountainous natural foci of the plague of Kyrgyzstan

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Statement of the Problem: The transboundary Sari-Dzhas natural focus of plague is located in north of Tien-Shan high-mountains of Kyrgyzstan. Plague activity within this focus has been high since 1940. In total, 473 plague epizootics were registered in grey marmots (*Marmota baibacina*), the main host from 1944 till 2016. The main objective is to analyze a long-term effect of preventive measures by dusting marmot burrows in this area undertaken in 1970s.

Methodology & Theoretical Orientation: The disinsection of the plague focus territory was implemented by dusting marmot burrows by DDT in 1974-1977. The flea control was aimed to disrupt the chain of pathogen transmission between animals and from animal to man

Findings: Before intensive flea vectors by DDT there were isolated 462 strains of plague in the focus. Those were - from marmots (225), small rodents (2), and from ectoparasites, mainly fleas (207) (Fig.1). The average index of flea abundance was 1.3. After dusting the marmot burrows the number of isolated strains decreased sharply with a total number of isolates strains reduced to 11. Those were - from marmots (8), small rodents (1), and ectoparasites (2). The index of flea abundance declined to 0.2-0.8.

Conclusion & Significance: The deep dusting of marmot burrows has led to the long-term effect on plague circulation within the Sari-Dzhas focus. However, alternative preventive measures, specifically more ecological friendly, should be introduced. Importantly, the plague endemic territory in the distant and difficult to reach areas of Tien-Shan Mountains should be monitored on annual basis.

Speaker Biography

Sabyrzhan Abdikarimov is graduated from Kyrgyz State Medical Institute specializing in hygiene, sanitation and epidemiology; President Academy of Management of the Kyrgyz Republic in 2012 with specialty in Political Management. Since 1981 he is working in sanitary-epidemiological administration of the Ministry of Health of the Kyrgyz Republic. In 2010 was the Minister of Health of Kyrgyzstan and since 2013 is co-working as a chief of Department of General and Clinical Epidemiology of Kyrgyz state medical academy. In 2016 he has been a Director of Republic center of quarantine and dangerous infections. In total he has more than 30 published works, 3 monographs, 5 methodical guides. The research area is Epidemiology of infections with waterways transfer, improving of diagnostics of especially dangerous infections: brucellosis, anthrax, plague, cholera in the Kyrgyzstan, control of activation of epizootic activity in the north of Kyrgyzstan.

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