

3. Xiao, Y. Flattening filter-free accelerators: a report from the AAPM Therapy Emerging Technology Assessment Work Group. / Y. Xiao et al. J of Applied Clinical Med Phys. – 2015. – V. 16, No. 3. – P. 12–29.

4. Timothy, C. Zhu. Dosimetric Challenge for Flattening Filter Free (FFF) Photon Beams. / C. Zhu Timothy. Materials of AAPM DVC Spring Symposium. – 2012.

EPIDEMICALLY IMPORTANT TYPES OF BLOODSUCKING MOSQUITOES (DIPTERA, CULICIDAE) IN THE TERRITORY OF BELARUSIAN POLESIE

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The comparative study of the species composition, biotopic confinement, epidemically significant species of bloodsucking mosquitoes (Diptera, Culicidae), which participate in the circulation of pathogens of vector-borne infections and invasions in the territory of the Belarusian Polesie.

Keywords: bloodsucking mosquitoes, Belorussian Polesie, places for hibernation, arboviruses diseases, epidemically significant species.

Bloodsucking mosquitoes have a negative impact on human life, hindering its economic activities and, in addition, they have great medical significance as carriers and intermediate hosts of pathogens of vector-borne infections and human and animal invasions (Western Nile Fever, Sial-Whitefish and Tychinya Viruses, Incoo, Sindbis, Batai, Ukuniyemi, Tribec, diseases of Malaria, Tularemia, Dirofilaria).

Among 13 arboviruses circulating in the Republic of Belarus, more than half are capable of causing disease in humans, 10 of arbovirus infections are isolated from bloodsucking mosquitoes [1].

Bloodsucking mosquitoes from the genus *Anopheles* on the territory of Belarus known as specific carriers of malarial plasmodium can also carry microfilariae, tularemia microbe and arboviruses. Malaria as a mass disease was eliminated in most areas of Belarus by 1956. To date, only imported cases are recorded [2].

Similarly, bloodsucking mosquitoes are carriers of dirofilaria. In the samples collected in August and September 2015 on the territory of the Minsk and Brest regions of the Republic of Belarus, mosquitoes infected with dirofilaria (*D. repens* and *D. immitis*) were recorded.

According to F.G. Rubanova in the conditions of Belarus the fact of spontaneous carrier of tularemia microbes by mosquitoes *An. Claviger* was revealed. Over the past 20 years, there have been 5 cases of tularemia in the republic, one of which is noted in the Brest region [3].

Mosquitoes are also carriers of arbovirus diseases. 131 out of 252 known arboviruses are transmitted by mosquitoes. The most common virus with mosquito transmission is the West Nile. On the territory of the Belorussian Polesie, the studies were conducted on the detection of the West Nile virus antigen in bloodsucking mosquitoes. According to the results of the study, from 2002 to 2016, 19 cases were isolated from the biomaterial. As for the spread of the disease in the Belorussian Polesie, it can be noted that the highest number of cases was recorded in Gomel region (11 cases – 58 %), and in Brest region – 8 cases (42 %).

It has been established that representatives of bloodsucking mosquitoes (Diptera, Culicidae) on the territory of Belorussian Polesie can belong to several groups of vector species of epidemic significance.

BIBLIOGRAPHY

1. Samoylova, T. I. Arboviruses in Republic of Belarus (field and experimental studies): author's abstract. diss. ... Doct. Biol. Sciences: 03.00.06; 14.00.30 / T. I. Samoylova; GU RIEM of the Ministry of Health of the Republic of Belarus. – Minsk, 2003.

2. Sabatinelli, G. Malaria in the WHO European Region (1971–1999). / G. Sabatinelli, M. Ejov, P. Joergensen – Eurosurveillance: 6(4), 2001.

3. Volkova, T. V. Detection of microfilaria DNA by *Dirofilaria repens* and *Dirofilaria immitis* in bloodsucking mosquitoes (Diptera, Culicidae) in the territory of the Republic of Belarus / T. Volkova [et al.] // Institute for Prob. of Natural Academy of Sciences of Belarus; Ministry of Natural Resources and Environmental Protection of the Republic of Belarus; Ed. V. F. Loginova. – Minsk, 2016.