

Respiratory infections

Molecular characteristic of influenza virus type B lineages circulating in Poland

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Since pandemic of era *Hong Kong* in 1968-69, co-circulation of two types of influenza viruses was laboratory confirmed. From this moment on, vaccines against influenza are trivalent. They contain two subtypes of influenza type A: A/H1N1/ and A/H3N2/, as well as influenza type B. Whereas in 1983, circulation of new variants of influenza B was noted (lineage Yamagata and Victoria). In 2013/2014 season, due to continuous circulation of both lineages of influenza virus B in the population of some regions of the world, the second lineage of influenza B was included into trivalent vaccine against influenza.

In Poland over many seasons, co-circulation of influenza type A and B was registered. However, influenza type A, unlike type B, was a predominant strain. According to ACIP's recommendations since the epidemic season 2013/2014 on some continents quadrivalent vaccines against influenza are administered for use due to circulation of lineage B-Yamagata and B-Victoria. Currently, on the polish pharmaceutical market only trivalent vaccines against influenza are available.

The aim of our research was determination whether isolated in Poland strains of influenza type B belong solely to the lineage B-Yamagata or maybe also to B-Victoria. Generally, in the epidemic season 2014/2015 in Poland circulation of influenza type B was confirmed in 34%. Totally 89 specimens of influenza B were tested, including co-infections of influenza B with influenza A subtypes: A/H1N1/pdm09 and A/H3N2/.

The foregoing research was conducted with the use of real-time RT-PCR. As a result of these experiments, we confirmed that in polish population only lineage B-Yamagata circulates. This fact indicates that vaccines available on the polish market did not require introducing the fourth component.

Key words: *lineages, influenza virus, vaccine against influenza, trivalent vaccine, quadrivalent vaccine*