

Riječ Uredništva

PTIČJA GRIPA I PANDEMIJA INFLUENCE: OČEKIVANA REALNOST

Poštovani čitatelji Infektološkog glasnika, cijenjeni kolegice i kolege,

U rukama držite prvi tematski broj Infektološkog glasnika s pet radova o jednoj od najaktualnijih javnozdravstvenih, ali i općih tema u svijetu ove godine, a to je ptičja gripa i isčekivanje nove pandemije influence. Ovi članci će vam pružiti neke objektivne, odmjerene i uravnotežene informacije koje su aktualne u ovom trenutku, razbiti medijski senzacionalizam, ali i upozoriti na opravdano veliki interes za influencu u svijetu.

Strah od ptičje gripe kruži svijetom, pojačava se svake godine, a nekoliko posljednjih mjeseci trese i Europu. Svi se boje i svi su zabrinuti. Strah raste sa svakom novom vijesti o pojavi virusa u ptica u našoj ili u susjednim zemljama. Ipak, još niti jedan čovjek u Europi nije obolio od ptičje gripe. Je li to najteža bolest? Naravno da nije, ali više od 50 % od 200 do sada oboljelih ljudi u svijetu je umrlo. To je zastrašujući postotak.

Svi se osjećaju bespomoćno. Svjetska zdravstvena organizacija svakodnevno objavljuje biltene i preporuke, daje upute, sugerira vladama da se ozbiljno pripremaju za sučeljavanje s pandemijom influence. Vodeći svjetski političari u obraćanju narodu ne zaobilaze ptičju gripu. Virus ptičje gripe, H5N1, već uzrokuje goleme gospodarske štete i vjerojatno će znatno utjecati na svjetsko tržište hrane. Zdravstveni sustavi se užurbano pripremaju za funkcioniranje u izvanrednim okolnostima. Spasonosno cjepivo protiv pandemijskog virusa Svjetska zdravstvena organizacija najavljuje za šest mjeseci nakon pojave pandemije. Strahovito dugo vrijeme! Postoje, vjeruje se, učinkoviti antivirusni lijekovi za sprječavanje bolesti. Proizvodnja je ubrzana, skladište se velike pričuve, ali nisu dovoljne. I u nas se razrađuju planovi i pripreme za pandemiju influence, od predbilježbe za pandemijsko cjepivo i nabave inhibitora neuraminidaze do reorganizacije cjelokupne zdravstvene službe.

Sada vrlo aktualnu situaciju s influencom u nas i u svijetu čine tri važne i međusobno povezane sastavnice toga problema: sezonska influenza koja se pojavljuje svake godine, ptičja gripa i nova pandemija influence.

Gripa ili influenza je relativno teška bolest dišnog sustava koja se pojavljuje svake godine u zimskim mjesecima u manjim ili većim epidemijama. Bolest je teška zbog čestih i različitih komplikacija, a neke su i pogibeljne (pneumonija) osobito u populaciji starijih ljudi. Influenca je još uvijek zadržala slikovit i zastrašujući epitet – *jedine neukročene pošasti iz prošlosti*. Budući da je imunost protiv influence tipospecifična, preboljenje bolesti prouzročene jednim tipom virusa ne pruža zaštitu od drugog tipa pa je čovjek neprekidno izložen infekciji virusima influence. Influenca se najuspješnije sprječava cijepljenjem, koje se zbog stalnih promjena virusa i kratke imunosti mora ponavljati svake godine.

Ptičja gripa, kao teška bolest u ljudi uzrokovana visokopatogenim virusom influence ptica, H5N1, prvi se put pojavila u Hong Kongu još 1997. godine, kada je od 18 oboljelih osoba šest umrlo. Iza toga vlada relativno dugo zatišje, a bolest se od 2003. godine ponovo pojavljuje u pet zemalja jugoistočne Azije. Ove je godine bolest registrirana i u Turskoj, Azerbajdžanu i Egiptu. Bolest se incidentalno, izuzetno rijetko i samo zgodimice prenosi s oboljelih ptica na ljude, a sa sigurnošću nije dokazan prijenos bolesti s čovjeka na čovjeka. Oboljevali su i umirali uglavnom mladi ljudi, djeca i adolescenti, bez poticajnih kroničnih bolesti.

Editorial

BIRD FLU AND INFLUENZA PANDEMIC: THE EXPECTED REALITY

Dear readers of the Croatian Journal of Infection, dear colleagues,

Here, in front of your, is a special issue of the Croatian Journal of Infection with five papers dealing with one of this year's increasingly important public health and general issues worldwide – bird flu and the expectance of a new influenza pandemic. These papers will hopefully provide some objective, rational and balanced information that are pressing at this moment, diminish media sensationalism but also inform about a justifiably large interest for influenza worldwide.

Fear from bird flu is spread around the world, more and more every year, and in the last several months has been present in Europe as well. Everyone is afraid and worried. Fear grows with every news on the manifestation of virus in birds in our or neighboring countries. However, no human has yet contracted bird flu in Europe. Is this the most severe illness? Of course not, however more than 50 % of the 200 so far infected people worldwide have died. This is definitively a terrible disease.

Everyone feels helpless. The World Health Organization daily publishes newsletters and guidelines, gives instructions, and suggests governments to seriously prepare for dealing with the influenza pandemic. Leading world politicians also mention avian flu when addressing the public. Bird flu virus, H5N1, already caused large economic damage and will probably greatly affect the world food market. Health care systems have been rapidly preparing for functioning in emergency situations. The WHO announced the availability of the life saving vaccine against the pandemic virus six months after pandemic occurrence. This is a tremendously long time! In the meantime, there are, however, effective antiviral drugs for prevention of disease. Their production has been speeded, large reserves are being stored, but they are not enough. In Croatia, plans are created and preparations made for influenza pandemic, from placing orders for pandemic vaccine and acquisition of neuraminidase inhibitors to reorganization of the entire health care service.

Current situation with influenza in our country and worldwide is consisted of three important and mutually interrelated components of the problem: seasonal influenza that occurs every year, bird flu and new influenza pandemic.

Flu or influenza is a relatively severe disease of the respiratory tract that occurs every year during winter months in smaller or larger epidemics. The disease is severe because of frequent and various complications, some even life threatening (pneumonia) especially among the elderly. Influenza has still kept its figurative and terrifying adjective – the last uncontrolled epidemic from the past. Since immunity against influenza is type-specific, recovery from a disease caused by one type of virus does not provide protection from contracting a disease caused by another type, so humans are constantly exposed to infections caused by influenza viruses. Influenza can be most successfully prevented through vaccination that has to be repeated each year because of constant changes of virus and short term immunity.

Bird flu or avian influenza, appeared for the first time in humans in Hong Kong in 1997 as a severe illness caused by a highly pathogen bird flu virus H5N1, when 18 people fell ill, six of whom died. After that a relatively long standstill period followed, until 2003 when the disease occurred again in five countries of the Southeast Asia. This year the disease was recorded in Turkey, Azerbaijan and Egypt. The disease is incidentally, extremely rarely and only occasionally trans-

Pojava pandemijskog soja, odnosno nova pandemija influence, očekuje se već nekoliko godina, i bez obzira na sadašnju aktualnu situaciju s virusom ptičje gripe H5N1. Kada se dogodi velika, korjenita, promjena virusa influence A pojavljuje se novi, pandemijski soj, za koji ljudi nemaju otpornost, niti se bolest može spriječiti aktualnim cjepivom. Zbog pojave ptičje gripe u ljudi i već zabilježenih promjena H5N1 virusa, strahuje se da bi on daljom mutacijom i adaptacijom na čovjeka mogao postati pandemijskim sojem. No, situacija s promjenama virusa influence A nije predvidiva, pa se može pojaviti i neki drugi pandemijski soj.

Vrlo veliku stratešku važnost pri pojavi pandemije imaju novi antivirusni lijekovi, inhibitori neuraminidaza – oseltamivir i zanamivir. Oseltamivir je registriran za liječenje i profilaksu sezonske influence u odraslih i u djece starije od jedne godine, a *in vitro* i na životinjskom modelu pokazuje dobro djelovanje na sve viruse influence, uključujući i H5N1. Primjena antivirusnih lijekova bit će jedini način za sprječavanje i liječenje pandemijskog soja u prvih nekoliko mjeseci dok se ne proizvede odgovarajuće cjepivo. Nezaobilazno je pitanje – je li svijet i danas posve bespomoćan u sučeljavanju s pandemijom gripe, kao što je bio u prošlosti? Hoće li pandemija gripe, kako sada predviđaju neki autoriteti, uzeti dva milijuna ili 150 milijuna žrtava u svijetu? Ne, nismo posve bespomoćni, jer postoje antivirusni lijekovi, mogućnost brže proizvodnje i primjene pandemijskog cjepiva, antibiotici i intenzivna medicina za liječenje komplikacija, a svega toga u prošlosti nije bilo.

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mitted from ill birds to humans, while transmission of disease from human to human has not been proved with certainty. Mostly young people, children and adolescents fell ill or died, without incentive chronic illnesses.

The occurrence of pandemic strain, i.e. new influenza pandemic, has been expected for several years, regardless of the current situation with bird flu virus H5N1. When a large, radical change in the structure of influenza virus A occurs, a new pandemic strain is formed, against which humans have no immunity, nor can disease be prevented with the currently available vaccine. It is feared that H5N1 virus, with further mutations and adaptation to men, could become a new pandemic strain because of the manifestation of bird flu in humans and already recorded changes in the H5N1 virus structure. However, since the situation with changes of influenza virus A cannot be predicted, some other pandemic strains may occur.

New antiviral drugs, neuraminidase inhibitors – oseltamivir and zanamivir will play an important strategic role in case of pandemic. Oseltamivir has been registered for the treatment and prophylaxis of seasonal influenza in adults and children older than one year of age, and it has showed favorable effect in vitro and on animal model against all influenza viruses, including H5N1. The administration of antiviral drugs will be the only way to prevent and treat pandemic strain in the first several months until a suitable vaccine is developed. However, the question still remains – is the world still helpless today in dealing with flu pandemic, as it was the case in the past? Will flu pandemic, as predicted by some authorities, take a toll of two million or 150 million victims worldwide? No, we are not completely helpless, because antiviral drugs now exist, rapid production and application of pandemic vaccine is possible, antibiotics and intensive case medicine for the treatment of possible complications is now available whereas all this was not the case in the past.

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