

Global Climate Change Related Zoonotic ID and Impact on Global Health Care Economics

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Abstract:

Global climate change may cause natural catastrophes, as well as an increase of vector-borne diseases (VBD) due to an emergence of anthropologic migration from tropics/ subtropics to mild climate zones. Caused unpredictable outbreaks are followed by large economic losses in global health economics. Recent outbreaks with their financial impact within the last 10 years are described and analyzed.

Introduction

Global climate change is characterized by global warming and subsequent climate related natural catastrophes which are secondary and partially anthropic (rainforest change in Amazon; extensive drought in the Sahel regions of Africa; floods due to hurricanes in Caribbean; typhoons in SE Asia). Those climate changes are related to a re-emergence of new zoonotic pathogens from the tropics and subtropics and the mild climates of Europe, USA and Mainland China. (1-5)

Example of climate related zoonotics

1. Zika, chikungunya and dengue invasion into Europe

The spread of Zika and chikungunya caused huge economic losses for the organizers of Olympic; Paralympic; Asia Pacific Games; World Championship of Samba; and Carnival in Brasilia, Singapore, India and Pacific Islands. However, due to the vector (same for all three viruses/diseases - *Aedes Aegypti* and *Aedes Albopictus* mosquitoes - those three diseases also invazded Europe; dengue in Madeira in 2017; chikungunya in Rimini in 2014; in Réunion and Marseille from 2010 to 2017 causing substantial economic losses to the tourist industries in Mediterranean Europe. (1-3, 5)

2. Leishmaniosis in the Balkans

Leishmaniosis is endemic in North/Central Africa. However, global warming caused the emergence of the sand fly vector from North Africa to Turkey, Greece and the Balkans, including Croatia, Albania, Bosna and Kosovo where the incidence of both visceral and cutamon leishmaniosis in appeared in Mediterranean tourists resorts. (2-5)

3. Malaria in Greece

In recent years (2015-2018) small epidemics of Maleria Parasites *Plasmodiumalciparum* a and *Plasmodium vivax* have been observed in the Athica Province in Greece and southern Sicily. The vector emerged probably through migration of birds (annual migration) from the Nile Delta. (1-5)

4. Coronavirus COVID-19 and avian influenza

At least 5 outbreaks of Avian flu and COVID-19 in China and EU, UK and USA (2020) caused

great economic losses. Avian has been reflected with the route of migrating birds from the Nile Delta to Balaton Lake and Neusiedler Lake in Hungary, Austria and Slovakia, on their routes to the countries of the thousands lakes (Finland, Poland). Fortunately, no (yet) cases of bird to human influenza have occurred. Coronavirus (flu bats, snakes etc.) devastated mainland China, Iran, Italy etc. in early 2020. (2-5)

Conclusion

Global climate changes also have caused an increase of vector born communicable (infects) diseases with global health consequences and extensive financial losses not only to health care, but to global economies in developed high-income regions (EU, USA).

References:

1. KIMULI D, KOMLOSI M, SABO I, BAUER F, KARVAJ M, OTRUBOVA J, JANCOCIC M, JANKECHOVA M, PAUEROVA K, POLONOVA K, MATEICKA F, BARTKOVJAK M, MIKOLASOVA G, SMREKOVA E, BENCA J, DURCOVA B, DORKO D, BEDNARIKOVA M, SCHIFFERDECKEROVA M, BARKASI D, OKOTH V, MULERA M (2019) *Highlands malaria among internally displaced refugees in mountain areas of Kenya, Rwanda and Burundi*. Lek Obz(Med Horizon)68.2019,5-6,149-150.
2. SHAHUM A, MIKOLASOVA G, KALAVSKA A et al. (2014) *Am, J Trop Med Publ Health*.55, 2014, SI,144.
3. HAJ ALI P, PUTEKOVA S, KABATOVA J, MARTIKOVA J, ZOLLEROVA K, BUCKO L, RADKOVA , VLCEK R, GREY E, OLAH M, DURICOVA Z, SVITEK R, SIMONEK T, OTRUBOVA J, BIBZA M, KOLIBAB M, MAMOVA A, PALENIKOVA M, MURGOVA A, TKACOVA L, KALATOVA D, JANKECHOVA M, BYDZOVSKY J, KHALIL I, MICHALIKOVA L, MRAZOVA M, LSKOVA A, HERDICS G, CARNECKY M, KHALED I (2016) *Are Migrants From Middle East Carriers of Resistant Bacteria*. Clin Soc Work & Health Intervention 7. 2016. 3,9-14.
4. SHAHUM A, SLADECKOVA V, BENCA J, DUDOVA Z, MIKLOSKOVA M, BIELOVA M (2017) *Respiratory isolates from the*

Orphanage in Phnompenh.,Clin Soc Work
Health Intervention,8,2017,1,17.
5. WORLD HEALTH ORGANISATION

(WHO) GENEVE: CORONAVIRUS COV-19
UPDATE (10.3.2020) www.who.org /10.3.
2020.