Emerging zoonoses and pathogens of public health concern

L J King (Ed.)


Bernard Vallant, Director General of the World Organisation for Animal Health, sets the scene by complimenting the contributors to this Scientific and Technical Review as ‘an outstanding job in describing and explaining a number of important emerging zoonoses and the factors that have both created their emergence and challenged our Veterinary Services, and the World Organisation for Animal Health (OIE), to become more engaged and responsive to these contemporary problems’.

Humans have altered their behaviour and lifestyles, resulting in an increased risk of becoming exposed to zoonotic pathogens. Perfect conditions have been created for the emergence or re-emergence of zoonoses. The reasons for emergence are multiple and difficult to predict as each new disease has emerged from an unsuspected source. The role of wildlife should not be underestimated in this scenario. It must be accepted that changes in animal production systems and in the food production chain contribute to the majority of pathogens causing food-borne diarrhoeal diseases being zoonotic.

Disease emergence is the result of an evolutionary response and the Review explores the biological, socioeconomic, ecological and anthropogenic factors causing this. Expansion of the human population and globalisation of trade are the main factors that will perpetuate the emergence of zoonotic diseases and their rate of emergence. In the overview to the problem of emerging zoonoses and pathogens of public health concern, it is stated that ‘perhaps it is time to adjust the concept of biosecurity to a larger dimension, that of the ecosystem’. Of interest is the fact that considerable input in the Review gives a modern perspective on ‘ancient diseases’ such as tuberculosis and rabies, while elsewhere it expands on conjecture around what can be learnt from animal corona viruses in the approach to such problems in human health as severe acute respiratory syndrome (SARS).

There is an ever-increasing awareness of the consequences for both human and animal health, of the growing number of pathogens that are acquiring resistance to antimicrobials. Many other critical factors of emerging zoonoses are, however, discussed and finally a case is made for stronger partnerships and collaborations amongst international organisations and human and animal health agencies and officials.

In 2000, the OIE published a major review on zoonoses 76 years after it was founded entitled ‘An Update on Zoonoses’. The Review, compiled only four years later, underlines the importance of emerging zoonoses ‘as recognition grows that the most powerful weapon might not be the next world war, a nuclear bomb, or even acts of terrorism, but rather Mother Nature’.

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