



One Health Perspectives on Emerging Public Health Threats

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Antimicrobial resistance and emerging infectious diseases, including avian influenza, Ebola virus disease, and Zika virus disease have significantly affected humankind in recent years. In the premodern era, no distinction was made between animal and human medicine. However, as medical science developed, the gap between human and animal science grew deeper. Cooperation among human, animal, and environmental sciences to combat emerging public health threats has become an important issue under the One Health Initiative. Herein, we presented the history of One Health, reviewed current public health threats, and suggested opportunities for the field of public health through better understanding of the One Health paradigm.

Key words: One health, Zoonoses, Antibiotic resistance, Infectious disease, Korea

INTRODUCTION

Increasing antimicrobial resistance (AMR) and emerging zoonotic pathogens, including avian influenza, Ebola virus, and Zika virus have threatened global health. These novel public health threats are urgent issues, because 61% of infectious organisms affecting humans are zoonotic [1]. Therefore, a heightened awareness has emerged of the need to address health issues through health management at the interfaces of human health, animal health, and environmental health. One Health is defined as an integrative effort of multiple disciplines working

locally, nationally, and globally to achieve optimal health for people, animals, and the environment, and it has been proposed as a paradigm through which such interdisciplinary collaboration can be introduced and encouraged [2]. To overcome the recent threats posed by AMR and emerging zoonotic diseases, it is becoming clear that the entire health system must address the One Health concept. The purpose of this article is to introduce the One Health paradigm and to describe how it is deeply related with the recent public health threats.

HISTORY OF ONE HEALTH

The concept of One Health is based on the historical concept of comparative medicine. In the premodern era, the purpose of studying animals was to extrapolate knowledge about animals to understand human medicine; thus, there was no dividing line between human and animal medicine. An 18th-century physician, Vicq d'Azyr, was one of the true forefathers of comparative medicine. At his time, rinderpest, a fatal infectious

Received: June 29, 2017 Accepted: October 3, 2017

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