



# The Opinion on Recent Clinic Antibiotics Abuse

Han Zhu<sup>1</sup> and Hongzhou Lu<sup>1-3\*</sup>

<sup>1</sup>School of Public Health, Bengbu Medical College, China

<sup>2</sup>Department of Infectious Diseases, Fudan University, China

<sup>3</sup>Department of Infectious Disease, Huashan Hospital Affiliated to Fudan University, China

## Commentary

Antibiotics help us treat minor or serious infections by killing bacteria or inhibiting the growth of bacteria. Antibiotics are used in a wide range of applications, such as skin infections, food poisoning, pneumonia, and even fatal infectious diseases such as tuberculosis and meningitis. In addition, the use of antibiotics after surgery can prevent wound infection and protect the patients who live with impaired immune system from bacterial infection. With the continue advancement of science and technology, the level of medical technology has been corresponding improved. Nowadays, antibacterial drugs are widely distributed, although antibiotics are beneficial to the controlling of microbial infections and applied more and more extensively. In recent years, the emergence of drug-resistant bacteria has disturbed to the treatment of clinical diseases [1], resulting in a gradual increase in the frequency of nosocomial infections. After many decades of antibiotic treatment in the first patients, bacterial infections have become a threat once again.

The abuse of antibiotics is an important factor leading to the emergence of bacterial resistance [2], which seriously threatens clinical treatment effect, and clinicians should pay more attention to this phenomenon. The higher the frequency of antibiotics was used, the higher the possibility of emergence of resistant bacteria. Hospitals are not the only place to promote the development of bacterial resistance. In some countries, in order to promote the rate of growth of livestock or prevent the spread of certain diseases in the herd, antibiotics are often used for livestock breeding, which means the bacteria with drug resistance genes can be transmitted to human beings through contaminated meat, animal products or manure-administered crops. These factors will cause the existing antibiotics to fail, which will seriously threaten the clinical treatment effect. At the same time, the pharmaceutical industry antibiotic development pipeline is also shrinking [3].

Although there are already warnings about the consequences of antibiotic abuse, antibiotics are still being used excessively worldwide [4]. The continued development of antibiotic resistance is one of the biggest challenges for medicine and global health. Under such circumstances, controlling the emergence of drug resistance is particularly important, which has an urgent need to facilitate the different stakeholders to take action. Starting from all aspects, promote the implementation of new policies, focus on research, and implement effective measures to address this challenge. Research has shown that we can help extend the lifespan of these life-saving drugs by exploring a range of therapeutic strategies that can be combined with antibiotics [5]. In addition, we can take the following measures to prevent the emergence of antibiotic resistance to some extent by controlling antibiotic abuse: (1) strict of testing and monitoring of microorganisms in a timely manner during clinical application, (2) conduct analysis of drug resistance in time [6], (3) if bacterial resistance occurs, timely adjustment of medication, according to the condition, (4) use antibacterial drugs with better antibacterial effect to achieve good antibacterial effect [7], (5) reduce the chance of microbial infection from the all over aspects, and promote the development of new antibiotics [8], (6) limit the purchase conditions of antibiotics, (7) at the individual level, good hygiene practices help reduce the spread of bacteria and thus reduce the need for antibiotics.

By continuously promoting the implementation of the above measures, clinicians can gradually increase the initiative to use various antimicrobial agents in clinical treatment. At the same time increase people's understanding of various antibiotics, when choosing antibacterial drugs, help people get more appropriate reference standards. In summary, for clinicians, in the specific analysis process for each research object, the drug resistance of the bacteria should be analyzed in time, and the antibiotics should be used reasonably to achieve a good antibacterial effect.

## OPEN ACCESS

### \*Correspondence:

Hongzhou Lu, Department of Infectious Diseases, Shanghai Public Health Clinical Center, Fudan University, Shanghai, China,  
E-mail: [luhongzhou@fudan.edu.cn](mailto:luhongzhou@fudan.edu.cn)

Received Date: 20 Jan 2019

Accepted Date: 30 Jan 2019

Published Date: 31 Jan 2019

### Citation:

Zhu H, Lu H. The Opinion on Recent Clinic Antibiotics Abuse. *Am J Clin Microbiol Antimicrob*. 2019; 2(1): 1031.

**Copyright** © 2019 Hongzhou Lu. This is an open access article distributed under the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

## References

1. Maraki S, Mavromanolaki VE, Stafylaki D, Hamilos G, Samonis G. The evolving epidemiology of serotype distribution and antimicrobial resistance of streptococcus pneumoniae strains isolated from adults in Crete, Greece, 2009-2016. *Infect Chemother*. 2018;50(4):328-39.
2. Ventola CL. The antibiotic resistance crisis: part 1: causes and threats. *P T*. 2015;40(4):277-83.
3. Bohlmann L, De Oliveira DMP, El-Deeb IM, Brazel EB, Harbison-PriceN, OngCY, et al. Chemical synergy between Ionophore PBT2 and zinc reverses antibiotic resistance. *mBio*. 2018;9(6):e02391-18.
4. The antibiotic alarm. *Nature*. 2013;495(7440):141.
5. Gill EE, Franco OL, Hancock RE. Antibiotic adjuvants: diverse strategies for controlling drug-resistant pathogens. *Chem Biol Drug Des*. 2015;85(1):56-78.
6. Hayashi D, Akashi Y, Suzuki H, Shiigai M, Kanemoto K, Notake S, et al. Implementation of point-of-care molecular diagnostics for mycoplasma pneumoniae ensures the correct antimicrobial prescription for pediatric pneumonia patients. *Tohoku J Exp Med*. 2018;246(4):225-31.
7. Park SE, Pham DT, Boinett C, Wong VK, Pak GD, Panzner U, et al. The phylogeography and incidence of multi-drug resistant typhoid fever in sub-Saharan Africa. *Nat Commun*. 2018;9(1):5094.
8. Roca I, Akova M, Baquero F, Carlet J, Cavaleri M, Coenen S, et al. The global threat of antimicrobial resistance: science for intervention. *New Microbes New Infect*. 2015;6:22-9.