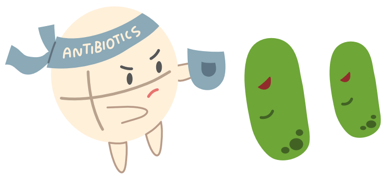
香港紅十字會
HONG KONG RED CROSS

2024-December

Health Express
Issue160

Antimicrobial Resistance (AMR)



Antimicrobial resistance (AMR) occurs when microorganisms (such as bacteria, viruses, fungi, and parasites) adapt to resist previously effective medications (i.e., antimicrobials). This phenomenon poses a significant threat to global health and the economy.

What are antimicrobial agents and antibiotics?

Various microorganisms exist, encompassing bacteria, viruses, fungi, and parasites. Antimicrobial agents, which include antibiotics, are medications capable of exterminating or inhibiting pathogenic microorganisms. Antibiotics are specifically designed to combat bacterial infections by either eradicating the bacteria or impeding their growth. Different classes of antibiotics are employed in the treatment of distinct bacterial infections. It is essential to note that antibiotics are ineffective against viral infections like the common cold and influenza (flu), and they do not expedite the recovery process.

What causes AMR?

Antimicrobial resistance (AMR) is a natural progression driven by genetic variations. Microorganisms evolve and thrive in the presence of antimicrobials, even when used correctly. Nonetheless, the misuse and overuse of antimicrobials, like inappropriate antibiotic administration for viral illnesses such as the common cold and flu, as well as the improper use of these drugs in livestock, hasten the development of AMR. Within the realm of antimicrobials, resistance to antibiotics used for bacterial infections stands out as the most critical issue.

When eradicating pathogenic bacteria in our bodies, antibiotics also inadvertently eliminate normal bacteria, creating conditions conducive to the proliferation of resistant strains. These resistant bacteria, often termed 'superbugs,' possess the ability to withstand multiple antibiotics, leading to challenging infections. While alternative antibiotics may exist, they could be less potent or result in increased side effects. Furthermore, the pace of new drug development lags behind the evolution of AMR. Without improvements in addressing AMR, the range of effective treatment options will diminish.

What are the consequences of AMR?

Should the issue of antimicrobial resistance (AMR) persist without improvement, current antimicrobial agents would lose their efficacy, rendering infections untreatable. This scenario could lead to prolonged illness and heightened mortality risks. In the absence of efficient antimicrobials for infection prevention and treatment, medical procedures like organ transplants, cancer chemotherapy, diabetes control, and major surgeries become notably riskier, especially for vulnerable patients.

Addressing Antimicrobial Resistance(AMR)

Do not demand antibiotics from your doctor

Follow your doctor's advice when taking antibiotics

Practise frequent hand hygiene, especially before eating and taking medicine, and after going to the toilet

Ensure your vaccination is up-to-date

Do not stop taking antibiotics by yourselves even if you are feeling better

Maintain cough etiquette, wear a surgical mask if you have respiratory symptoms

In 2016 the Government set up a High Level Steering Committee on AMR (HLSC) and formulated the second Hong Kong Strategy and Action Plan on Antimicrobial Resistanc in 2022.

For details of information about antimicrobial resistance, please visit the CHP thematic website

References:
Centre for Health Protection, DH

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