

TYPES OF ANTIBIOTICS AND THEIR IMPORTANCE

Ishpo’latova Nilufar Samariddin qizi

1st year student of the Faculty of Pharmacy of Samarkand State Medical University

Scientific supervisor: Asatullayev Rustam Baxtiyorovich

Assistant at Samarkand State Medical University

Annotation: *This article provides detailed information on the origin, types, mechanism of action and role of antibiotics in modern medicine. Antibiotics are an important tool in the treatment of bacterial infections. The article also covers their correct use, advantages and negative effects.*

Key words: *Antibiotic, bacterial, infection, penicillin, macrolides, cephalosporins, pharmacology, antimicrobial agents, resistance, treatment.*

Antibiotics are considered one of the most important inventions in modern medicine. They are widely used in the treatment of diseases caused by bacteria. Antibiotics were first invented at the beginning of the 20th century and play a great role in saving human lives.

General Understanding of Antibiotics

Antibiotics are substances produced or artificially obtained by microorganisms (bacteria, fungi) that have the ability to destroy other microorganisms or stop their growth.

Main types of antibiotics

1. Penicillins

Penicillins are considered the earliest invented antibiotics. They are the bacteria that break down the cell wall and kill it. Examples: amoxicillin, ampicillin.

2. Tsefalosporins

Antibiotics of this group have a wide spectrum of action and are used in the treatment of many infections. They also attack the bacterial cell wall.

3. Macrolides

Macrolides stop bacterial protein synthesis. They are commonly used for respiratory infections. Examples: erythromycin, azithromycin.

4. Tetratsiklins

These antibiotics are of broad spectrum and are effective against a variety of bacteria. They disrupt protein synthesis.

5. Aminoglycosilar

They are strong antibiotics and are used in the treatment of severe infections. For example: gentamycin.

6. Fluoroquinolones

These modern antibiotics affect the DNA of bacteria and stop their reproduction.

Mechanism of action of antibiotics

Antibiotics affect bacteria in a variety of ways:

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Breaks down the cell wall

Stops protein synthesis

Affects DNA and RNA synthesis

Inhibits metabolic processes

The use of antibiotics

Antibiotics are used to treat the following diseases:

Respiratory infections

Urinary diseases

Skin infections

Intestinal diseases

Benefits of antibiotics

Quickly disintegrates infections

Treats life-threatening diseases

Prevents complications after surgery

Negative effects of antibiotics

Allergic reactions

Disruption of the intestinal microflora

Immunity Pasayishi

Emergence of antibiotic resistance (resistance)

The problem of antibiotic resistance

In recent years, the number of antibiotic-resistant bacteria has been on the rise. And this is due to improper and uncontrolled administration of the drug. Therefore, it is important to take antibiotics only with a doctor's recommendation.

Conclusion

Antibiotics play an important role in maintaining human health. With their correct and reasonable application, many diseases can be prevented and cured. However, their improper use can have negative consequences.

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