Entercococcus faecium

E. faecium belongs to the entercocci group. Normally, enterococci are present in gastrointestinal microbiota. However, infection occurs when the number of this group increases. They can survive on a lot of surfaces and they are resistant to cleaning products. These characteristics promote a wide distribution in hospital environments.

In 1980, E. faecium was sensitive to vancomycin, but in 2007 more than 80% of E. faecium became resistant. E. faecium is present in gastrointestinal microbiota.

Staphylococcus aureus

S. aureus can be found in different parts of the body. Carrierage is asymptomatic, and it varies with age, sex or geographic location. However, it is an opportunistic pathogen that can cause infection to death.

Penicillin was the first treatment used, but in the 1950s more than 50% of S. aureus were resistant to it. Methicillin was the next antibiotic used. Two years later, Methicillin Resistant Staphylococcus aureus (MRSA) were found. Nowadays, MRSA is over the world. In fact, it is the main infection associated to European hospitals.

Klebsiella pneumoniae

Initially K. pneumoniae was an important community's pathogen. Few years later, it was established in the hospital environment causing pneumonia and urinary infections.

About 75-80% of clinical infections are associated with K. pneumoniae. Furthermore, it can do biofilms (a layer that protects from environment) on medical devices like catheters, which complicates the treatment.

A. baumannii rarely is forming part of human's microbiota. It can affect skin and respiratory tract especially in a military environment or in accidents or wounds. A. baumannii is a multidrug-resistant pathogen. It is resistant to almost all antibiotics.

Acinetobacter baumannii

In 1970 it has sensitivity to most antibiotics, but nowadays it shows a lot of resistances. The diversity of treatments shows the lack of effective therapy.

Pseudomonas aeruginosa

P. aeruginosa is an important causative agent of pneumonia in hospitals and burn wound infections. Now, it is responsible from 10 to 15% of ICU's infections and between people with chronic lung diseases.

Enterobacteriaceae

Enterobacteriaceae are a group of microorganisms. Salmonella: Infection due to uncooked food or contaminated water. The major symptoms are gastroenteritis and fever.

Escherichia coli: It produces an autoinfection. It causes meningitis in neonates, blood and urinary infections.

Shigella: It is rarely found in microbiota. It can be transmitted by food or contaminated water. It causes 185 million of infections every year and more than 1 million deaths.

How do you prevent antibiotic resistance?

Antibiotics have been used in a lot of situations. Unfortunately, there are more and more infections without effective treatment due to a bad use. For this reason, we need to use correctly the treatments that we have.

Do not treat yourself, just if the doctor says.

Ask for microbiological tests to make sure it is the right treatment.

Wash your hands to stop infections.

Get vaccinated. It protects against infections.

Do not ask for antibiotics when your doctor thinks they are unnecessary.

Do not re-use. They might lose their efficacy or you may need another treatment.

Take antibiotics prescribed only for you. Treatments are specific for each microorganism.

What should doctors do?

Prescribe correctly: dose, duration and indications.

Knowledge of resistances in their areas.

Good use. New antibiotics only for multiresistance cases.

Identify the pathogen for a good treatment.

Hygiene controls with every patient.

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