



An Evaluation of Molecular Genotypic Colistin-Resistant Enterobacteriaceae of *Klebsiella*

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ABOUT THE STUDY

The tribe *Klebsiella* belongs to the genus *Klebsiella*, a member of the family Enterobacteriaceae. *Klebsiella* is an immobile, rod-shaped Gram-negative bacterium with a prominent polysaccharide capsule. This capsule envelops the entire cell surface, explaining the large appearance of the organism on Gram stain and providing resistance to many host defense mechanisms. Members of the genus *Klebsiella* usually express two antigens on the cell surface. The first is a lipopolysaccharide (O antigen) and the other is a capsular polysaccharide (K antigen). It occurs when *Klebsiella* pneumonia enters the body directly. This usually happens for the following reasons:

Person-to-person contact

It happens when someone touches a wound or other sensitive part of the body with a contaminated hand

Hospital equipment

It happens about 8-12 percent of people who develop pneumonia from these bacteria on ventilators.

Klebsiella pneumonia can infect different parts of the body and can cause different types of infections with different symptoms. *Klebsiella* pneumonia often causes bacterial pneumonia or lung infections. It happens when bacteria invade the respiratory tract. Wounds, catheters, and intravenous line sites are all places where *Klebsiella* bacteria enter the body. Once inside, bacteria can develop into infectious diseases. Symptoms of *Klebsiella* infection depend on the bacteria and where they enter the body. For example, bacteria that have invaded the respiratory tract can cause lung infections. Symptoms of *Klebsiella* pneumonia are Chills, High fever, Shortness of breath or shallow breathing, and Cough with sputum. *Klebsiella* is a type of Gram-negative bacterium. *Klebsiella* is usually found in the human intestine

and stool. When these bacteria reach other parts of the body, they can cause infections. Each type of infection is the result of a *Klebsiella* microorganism entering your body. In maximum cases, these microorganisms are picked up in healthcare-related environments. These settings can include nursing homes, hospitals, and intensive care units.

A KO contamination is recognized with a blood, mucus, or urine pattern. The health care professionals will take one or more samples and send them to a laboratory for testing. These samples could be tested below a microscope for the presence of the bacterium and cultured to look if any microorganism grows. Some humans with a KO infection need to be tested with additional tests which help the doctors to assist and decide how advanced the infection is. Health care professionals may suggest with chest X-ray and CT scan if the patient is developed a lung infection and pneumonia. These tests will evaluate the severity of the lung infection, which further helps the doctors treat it the most effectively. The doctor may even be likely to check the feasible sites in which the bacterium can enter the body. This consists of any wounds, catheters, or indwelling tubes or machines. Like any other infection, antibiotics are also involved in the treatment of KO. Some strains of KO can be antibiotic-resistant i.e., frequently used antibiotics will not show much effectiveness against the bacteria. Healthy humans frequently get over a KO infection quickly and those who have a weaker immune system can experience more difficult situations best example is a person who drinks alcohol will experience a prolonged infection and also who have other infections like bloodstream infection can experience an even more difficult situation. Both types of infections can be treated, but with a heavy dosage of antibiotics and they may experience very serious side effects. People may even experience lung damage if the infection isn't treated quickly and it may even lead to long-term complications and in most of the cases, KO infection can be deadly.

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