Klebsiella pneumoniae may cause Severe Inflammatory Encephal

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Published Date: 06-13-2014

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Nov 11, 2011 was marked by the acme of the biggest reported case of poison in the history of the 20th century. An anonymous body was found dead in Rome. It was clutching a plastic bag over his head which seemed to contain pieces of a skinhead style handprint, some gold rings and several strips of plastic that may have acted as a mouth or lip mask. An analysis of the bodyâ€™s cell and tissue samples by experts found that the victim was carrying the bacterium Klebsiella pneumoniae.

Tests of the suspected strain of the bacteria showed that it belongs to a family of four known to cause a serious form of renal failure and acute liver disease. The bacterium also causes acute diarrhoea and can cause complications in intestinal/gastrointestinal patients. During the past 100 years, Klebsiella pneumoniae has been identified in over 50,000 people worldwide. It has also been found in human liver tissue in a handful of other cases of reported human kidney disease.

The causes of the under-diagnosis of this bacterial infection remain unknown, but the bacterium has been found to colonize human cells in areas of high sanitation and has been found to be common in sewage sites. The pathogen is transmitted directly from the human host to the intestine through blood or feces. Acute Klebsiella pneumoniae infection often occurs during the course of septicemia, skin and wound infections or as a consequence of a severe malnutrition episode.

A simple blood test can detect the presence of Klebsiella pneumoniae in a sample of blood. But the bacterium has to be exposed to hepatitis virus, bacteriuria, undigested human or animal liver enzymes and iron hydroxides, for example. Treatments for people with current or persistent immune deficiency are preferable to cure the infection. Klebsiella pneumoniae diarrhea can be treatable with topical antidiarrheal agents such as lactulose or gelatin which are able to reduce the quantity of debris in the intestine. The response of healthy cells and immune cells and to bleomycin, an antiviral antibiotic, also improve the situation.

Some time ago, we wrote about an episode in which two communities in Japan had been affected by a strain of Klebsiella pneumoniae belonging to the A. bureausi strain. Later, the strain became widely accessible in Japan. From 2003 to 2006, many people were infected with this bacteria in Japan. According to the health ministry, several hundred people were admitted to hospital for treatment of acute Klebsiella pneumoniae infections, of whom 70 patients died. They were mostly elderly residents of the community with health problems and rarely people with cirrhosis or liver cirrhosis.

The report about the male corpse being found in Rome clearly shows the similarity of the human pathogen to that of the burechi strain. The link between this bacterium and the deadly SARS incident in 2003 implies that the bacterium was responsible for the spread of the virus that caused SARS. But the CDC as well as the CDC Epidemiology Division in the CDC declare that:

â€œThere is no evidence that the Klebsiella pneumoniae bacterium in the wounds of the SARS patient was responsible for the infectionâ€.

In the period 2002 to 2003, about 30,000 cases of acute Klebsiella pneumoniae infections were detected across the United States, where the incidence was above one-tenth of the infection of the prior year. Among those infected, over 25% were hospitalized and over 70% experienced some illness. In 2006, the incidence of the Klebsiella pneumoniae infection was at 5 per million (p) in the United States, and SARS was slightly higher than it was for Klebsiella pneumoniae infection.

According to the figures of the CDC epidemiology division the most recent case of E. coli O104:H4 related to infection as a result of consumption of farm and food products is in the United States, during July and August 2011, a state of Illinois patient developed severe symptoms within a few days after consuming tainted tomato paste and raw milk. The illness has been diagnosed as E. coli O104:H4 with symptoms of Gastrointestinal Strain.

References

2-ACBL Sanctions Task Force, February 18, 2003.(recommended periodic review)

Larson-Jones, E., Dail, J., Duruk, J., & Bunn, J. (1999). Infection of humans with Escherichia coli O104:H4.

Short

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