E. coli: the history of the disease, treatment

Health & Medicine

Introduction

Diseases caused by microorganisms in humans are referred to as pathogenic diseases. These diseases may be caused by variety of agents like bacteria, viruses, fungi these pathogenic agents will cause a range of diseases and conditions. Escherichia coli bacteria typically live in the intestines of healthy individuals and animals. Most strains of E. Coli are harmless or cause temporary diarrhoea with the exception of a number of strains that can cause severe abdominal cramps, bloody diarrhoea and vomiting. However, current information suggests that E. Coli ordinarily derives from the fecal matter of warm-blooded animals

Diseases Caused by Pathogen

E. Coli is one amongst the top frequent causes of any common bacterial infections, such as inflammation, bacteremia, inflammation, urinary tract infection, and traveler’s diarrhea, and different clinical infections such as meningitis in infants as well as respiratory disease.

Epidemiology

E. Coli was initially isolated in 1975 from a lady who suffered from bloody diarrhea , however it wasn’t categorized as a major human infective agent till 1982 after 2 foodborne outbreaks within the USA were found to have originated from to the consumption of contaminated hamburger meat. Since then, over two hundred outbreaks of E. coli have been reported from over thirty countries worldwide. According to a review done by Doyle et al in 2006, most outbreaks occurred in developed countries, such as the US, UK and Canada. However, it had been noted that lack of advanced diagnostic

laboratories in developing countries could limit the number of infections being reported. The largest E. coli occurrence took place in Sakai city of Japan in 1996 during which the radish sprouts in class lunches were contaminated, causing a total of 9451 cases which resulted in twelve deaths.

Description of the Pathogen

E. Coli is a gram negative, non-spore forming rod. It may or may not be mobile.(Some rods are flagellated and some are not.)The organism is a facultative anaerobe and ferments simple sugars such as glucose to form lactic, acetic, and formic acids. The optimal conditions for growth are a temperature of 98. 6°F, with a range of 45 to 114°F.

Mode of Transmission

Raw foods, significantly those of animal origin like raw beef and milk are often contaminated with E. coli. Individuals also are carriers of this microorganism

and may transmit it to food merchandise through fecal contamination as a result of inadequate hand personal hygiene. E. Coli is found on fish and shellfish taken from sewage-polluted waters. If a contaminated water is used to water fresh fruits and vegetables, these foods too can become contaminated. Carcasses are typically contaminated with fecal material of infected animals or from alternative contaminated carcasses or equipment. It has been noted recently that young cows square measure more likely to be a carriers of this microorganism than older cows. Prepared foods will become contaminated with E. Coli from equipment that has not been cleaned and

sanitized after it had been used to prepare raw food merchandise and from infected food handlers.