

Fresh Food Samples Found To Be Resistant To Antibiotics: New Study Reveals

A rising concern in today's food industry is the increasing use of antibiotics in poultry farming. This has given rise to pathogens developing an antibiotic-resistant gene. After studies conducted by Indian researchers from the Centre for Disease Dynamics, Economics & Policy (CDDEP) found a high level of antibiotic-resistant pathogens in chicken, it has recently been found that fresh food samples contain bacteria that is resistant to even the most powerful antibiotic.

Dr. Abdul Ghafur of Apollo Cancer Institute, Chennai, an infectious diseases expert, presented his study on this at the European Congress of Clinical Microbiology and Infectious Diseases, which concluded recently at Madrid. His study found out that the presence of colistin-resistant bacteria in food samples like chicken, fish, vegetable, etc., that were collected both from markets and households. 110 food samples were collected from Chennai, out of which a whopping 46% ended up growing colistin-resistant bacteria like *E.coli*, *Enterobacter spp*, and *Klebsiella spp*.

Colistin is an antibiotic that has been used on a high scale as a growth promoter in the animal husbandry sector and this practice is more rampant in India. When this poultry litter is used as a fertilizer in farms, the bacteria get transmitted into the fresh produce. Though the presence of colistin-resistant bacteria in raw food samples has been reported in more than

30 countries so far, this is the first time it has been reported in fresh food samples.

“Presence of colistin-resistant bacteria does not affect the edible quality of food, but we need to worry about them because once these resistant bacteria enter our gut and multiply they can spread resistance to other gut bacteria too,” Dr. Ghafur has said to *India Science Wire*.

The more serious threat that has come to light with this finding is the possibility that bacteria might develop resistance to all antibiotics, not just colistin. This can happen when there is a genetic mix-up between food bacteria resistant to colistin alone and food bacteria resistant to all antibiotics except colistin. “This will make infections such as urinary tract infections or those caused due to surgery and chemotherapy untreatable. We call these bacteria ‘pan drug-resistant’-resistant to all antibiotics available in the modern medicine armamentarium,” Dr. Ghafur further mentioned.

This study clearly highlights the fact that immediate steps against the use of colistin as a growth-promoter is the need of the hour. It is ironical that about 200 tonnes of colistin are being imported to India every year, most of it from China, a country that has banned the use of colistin as an animal growth-promoter in the first place.