

Responsibility of Foods Animal Transferring Antimicrobial Resistance E. coli to The Human Population in Saudi Arabia

Abstract:

Consuming food from an animal source fed or treated with antibiotic as growth stimulants to induce health and improve production raises the importance of the cause that led to antimicrobial resistance and its dramatic increase around the world. Data retrieved by multiple electronic databases: Saudi Health Ministry, Saudi Ministry of Environment, Water, and Agriculture, Saudi Food and Drug Authority, PubMed and Scopus for research articles published between 2013 and 2023 globally. Many government agencies supervise the production of meat in Saudi Arabia through different stages in the food chain. In the past five years, animal food consumption has increased in Saudi Arabia according to the increase in local production of red meat in 2021 AD, from 178,000 tons to 265,000 tons in 2022 AD, as the livestock slaughtered during the year 2022, including goats, sheep, cows, and camels, reached 8,787,576. A previous study also showed that an individual in Saudi Arabia consumes 73.26 grams of red meat per day. The studies showed the prevalence of E. coli strains in Saudi Arabia and their ability to resist a large spectrum of antibiotic groups such as β -lactams, chloramphenicol, and tetracycline. In conclusion, treatment for E. coli infections will be highly difficult with frequently used antibiotics, as growth factors or therapy have led to a rise in the resistance pattern of bacteria in meat products and their ability to be transmitted to humans. We recommend incorporating monitoring and management of the antibiotics to help reduce the health risks associated with antibiotic-resistant E. coli strains.