

## OP 06 - Extended Spectrum of Beta Lactamase Producing Escherichia Coli Prevalence of Chicken Stools in Selected Broiler Farms in Galle District.

Karunarathna.R.M.C.S<sup>a#</sup>, Wijerathna G.B.<sup>b</sup>

<sup>a</sup>Department of Medical Laboratory Sciences, Faculty of Allied Health Sciences, University of Ruhuna <sup>b</sup>Department of Microbiology, Faculty of Medicine, University of Ruhuna

#Corresponding author: gayabw@yahoo.co.uk

**Background**: *Escherichia coli* (*E.coli*) is commensal inhabitant of the gastro intestinal tract and one of the most important pathogens in human. The frequent administering of antibiotics in poultry may contribute to the emergence of antimicrobial-resistant strains. So it is necessary to examine antibacterial activity of chicken feed and water. Consumption of chicken in meals is higher compared to other livestock in Sri Lanka. Human can be infected with extended spectrum of beta lactamase (ESBL) via food chain, mainly through chicken.

**Objectives**: The aim of this research is to determine the extended spectrum beta lactamase producing E.*coli* prevalence of chicken stools in selected broiler farms in Galle district and to determine chicken feed and water as a contributory factor.

**Methodology:** Stool samples (n=80) were collected from selected broiler farms in Galle district. Isolates were confirmed as *E.coli*. ESBL confirmatory double disk method was performed according to the Clinical & laboratory standard institute method (CLSI). Ready to serve chicken feed and water samples were collected and those were tested against two types of *E.coli* to detect the presence of the effect of any antibacterial substances.

**Results and conclusions:** Different types of *E. coli* (n=86) were isolated from 80 chicken stool samples. There were no ESBL producers among all isolated E coli. There were no antibacterial activities demonstrated in food or water served for chicken in the farm no 01 & no 02 against *E.coli* ATCC 25922 and ATCC 35218. There were antibacterial activities in farm no 03 and 04 although only the farm no 04 declares the use of the antibiotic Cotrimoxazole. There were no ESBL producing *E.coli* prevalent in chicken stool in the selected farms in Galle district indicating the risk of transmission of ESBLs to the human via consumption of chicken meat is minimum. This may be due to the least usage of antibiotics containing food in poultry farms. Further island wide studies are necessary to determine the prevalence of ESBL producing chicken stool in *E.coli* in poultry farms in Sri Lanka

*Keywords:* Broiler farms, chicken stools, contributory factors, prevalence of ESBL producing *E. coli*