Abstract:

Background and Objective: *Campylobacter* is a common type of bacteria in humans and poultry, which generally accounts for various diseases in humans and commonly, poultry have a significant role in human campylobacteriosis. The aim of this study was to evaluate the prevalence of *Campylobacter* in the poultry cecum which sampled from broiler chickens.

Materials and Methods: This randomized clinical trial was conducted in the city of Zabol, Iran. A total of 100 samples of chicken cecums were randomly collected from the 20 aviculture in Zabol. After sampling in aseptic environment and on ice, samples were transferred to the laboratory and evaluated by multiplex PCR method. By which, PCR products were electrophoresed on a 1.5% agarose gel and 589 bp for *Jejuni* type as well as 465 bp for *Coli* type, were have been considered.

Results: According to the results, 16 of the samples were found to be infected by *C. Jejuni* and 29 of them were infected by *C. Coli*. The infection prevalence showed a significant difference between these two types of *Campylobacter* (P value= 0.011). But, on the other hand, there were no significant difference had founded between fall and winter in both *C. Jejuni* (P = 0.538) as well as *C. Coli* (P = 0.899). the findings were same as the former results for over and under 30-day chikens for *C jejuni*, but the prevalence of *C. Coli* between these two periods were founded to be significant (P = 0.001).

Conclusion: According to this study the broiler poultry in Zabol had a relatively high prevalence of *C. jejuni* and *C. coli*, Therefore, due to the infective effect of eating infected chickens, in human, it seems that knowing the infection risk factors and its related control mechanism is vital and necessary.

Campylobacter jejuni, Campylobacter coli, broiler chiken

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The study of broiler infection to *Campylobacter jejuni* and *Campylobacter coli* in the final breeding ages by multiplex PCR in Zabol

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