Abstract:

Salmonella enteriditis is the most critical food borne pathogen involves in enteric infections throughout the world. However such infections are more common in developing countries. As *Salmonella* infections are mostly related with meat, this study was designed to evaluate the aseptic quality of local raw chicken meat, local ground chicken meat and processed frozen chicken meat sold in the local markets (Ghaziabad, Dharampura, Sadar, Joraypul) of Lahore. Isolation, biochemical characterization, antibiotic resistance pattern and molecular identification assays were performed. A total of 80 (N=80) samples which includes leg piece (n=20), Chest piece (n=20), processed frozen chicken meat (n=20) and local ground chicken meat (n=20) were supplemented in tetrathionate broth and distinctive black centered *Salmonella* colonies were obtained on XLD and *SS* agar. Isolated colonies were tested against commonly used antibiotics such as tetracycline, streptomycin. Selected and well isolated colonies were amplified in polymerase chain reaction (PCR) targeting *sefA* gene sequence. Out of 80 samples, 5% (1/20) processed frozen chicken samples, 30% (06/20) local ground chicken meat samples, 15% (03/20) local raw leg piece samples and 10% (02/20) local raw chest piece samples were discovered positive for *salmonella spp* based on biochemical characterization. In addition, *Salmonella spp* showed maximum resistance against tetracycline and novobiocin. While *Salmonella spp showed* no resistance against chloramphenicol. PCR targeting *sefA* gene revealed positive result of *Salmonella* in 15% local ground chicken meat samples, 5% positivity in local raw leg piece samples and 5% positivity in local chest piece samples. While no positive result for *Salmonella enteriditis* was shown in 20 processed frozen chicken samples by PCR. The data obtained from different sources of chicken meat were statistically analyzed by Chi-square test. Statistical analysis (p-value =0.256) showed that PCR test results were not significantly associated with source of sample because p-value was greater than 0.05. The current study concludes high incidence of *Salmonella* in local raw chicken meat due to deprived hygienic methods and therefore highlights the demand for adopting hygienic measures.