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Occurrence of enterotoxin producing Clostridium perfringens in meat caries available in eating houses within Colombo City.
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The general Objective of this study was to isolate and identify C.perfringens in meat curries available for sale in Colombo City. The specific objectives included determining which type of curry harboured it predominantly, whether colony counts were significant (-10 5), the optimum temperature for heat activation of spores, sporulation in laboratory media, heat resistance of spores and the ability to form enterotoxin. Out of two hundred randomly selected samples comprising 100 chicken and 100 beef analyzed. Clostridium perfringens was isolated in 47 chicken and 31 beef samples. Significant Colony Counts (-10 5), were observed in 12 chicken and 8 beef samples. For heat activation of spores 75 C proved superior to 65 C. Sporulation was obtained in 33 chicken and 15 beef isolates. Modified Duncan and Strong medium was the most efficiant of the three sporulation media evaluated. Heat resistance of spores was observed in 22 chicken and 11 beef isolates. Enterotoxin formation was detected in 6 chicken and 3 beef isolates. Significant levels of C perfringens were present in both types of curries (p0.05). Isolates from both types showed attributes facilitating survival and proliferation in food as well as the ability to cause food poisoning. It is recommended that isolation and enumeration procedures for this organism be incorporated to the analysis of food samples from outbreaks.