Bacteriological quality of ready-to-eat foods: A case study of foods sold at Korle-Bu Teaching Hospital and its immediate environs

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Ready-to-eat foods are those that are ordinarily consumed in the same state as that which they are sold and the bacteriological quality of these foods is an indication of the level of contamination. These foods are sold at relatively cheaper cost than those sold at restaurants and hotels and at easily accessible places. Patients, health care providers and residents living around the hospital environment depend on this source of food for their daily nutritional requirements. Lack of quality control measures by local authorities and poor hygienic practices by vendors may affect food safety thus creating an opportunity for microbial contamination of food. Illness due to microbial contamination of ready-to-eat foods is therefore of public health concern. The overall aim of this study was to assess the bacteriological wholesomeness of ready-to-eat foods sold in public places.

64 food samples (comprising of 12 different food types) were taken from vendors within and outside the hospital premises. All food samples were collected in sterile disposable containers (Sterilin bags). Each sample was properly labeled with a number code, subject name, type of food and date of collection. Demographic data of the vendors and the sanitary nature of the vending environment were adequately noted. Culture of samples collected was performed and organisms isolated were thus identified using standard biochemical methods.

Staphylococcus spp. and Pseudomonas spp. were the most predominant species isolated with each constituting 24.13% of the total number of bacteria isolated during the study while Salmonella species was the least isolated (0.6%). 37.5% of the samples analyzed had standard plate counts within the satisfactory limit while 62.5% were above the acceptable limit. 42.2% of the samples analyzed had enterobacteriaceae counts within the satisfactory limit while 57.8% were above the acceptable limit. There was no significant difference between the total quality and hygienic quality of foods sold within and outside the hospital.

Keywords: ready-to-eat foods, bacteriological quality, Enterobacteriaceae, food safety