OCCURRENCE OF SALMONELLA SPP. IN FLIES AND FOODSTUFF FROM PORK BUTCHERIES IN KAMPALA, UGANDA

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Food-borne diseases such as salmonellosis are a major cause of human gastroenteritis worldwide, especially in the developing world due to poor sanitary conditions. Flies feed on food and breed in feces and other organic material. As such they are known vectors of Salmonella spp. Given that pork consumption in Uganda is rapidly increasing while good food safety practices remain absent, this study aims to assess the occurrence of Salmonella spp. in pork butcheries as a contribution to improve hygiene.

Seventy-seven pork butcheries out of 179 mapped in a previous survey in Kampala were randomly selected. From June–October 2014, samples of house flies, foodstuff and equipment were collected from all butcheries. Cultural isolation of Salmonella spp. was performed according to ISO 6579:2002.

Among 693 samples, 64 (9%) tested positive for Salmonella enteritidis. Among the positives, 32% were samples of raw pork (25), 25% flies' midguts (19), less than 9% water (7), tomatoes (6), cabbage (4), onions (2) and one case on roasted pork1, respectively. Positive flies coincided with contaminated foodstuff in 29% of the butcheries. All 154 samples from either butchers' hands or their equipment were negative for Salmonella spp.

The prevalence of S. enteritidis, especially on raw pork and in flies, illustrates the need for improving food safety in pork butcheries. Further research is required clarifying the gaps; especially the role of flies as microbiological carriers. In this context investigations are ongoing to identify Salmonella serotypes and their antimicrobial drug-resistance situation. However, these findings merit increased attention and can be used to improve knowledge, attitudes and practices amongst butchers.

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1Salmonella enterica subsp. enterica serovar Gallinarum