

POSTER PRESENTATION

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Detection of *Salmonella* enteritidis, typhi and typhimurium in foods by multiplex PCR in children hospital

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From First International Science Symposium on HIV and Infectious Diseases (HIV SCIENCE 2012) Chennai, India. 20-22 January 2012

Background

Food-borne illnesses have high prevalence in the world, which are caused by consumption of water or food contaminated. Nowadays, involvement caused by *Salmonella* bacterium, serotype enteritidis and typhimurium are the major infection all around the world. So the purpose of this study is detection of *Salmonella* enteritidis, typhi and typhimurium in different kinds of foods by multiplex PCR method.

Methods

The study was conducted on 170 samples of food products including, milk, beef, poultry, salad dressing and 80 samples in contact with food items such as knives, cutting boards and the hands of personnel working in a hospital's kitchen. After collecting the samples, the standard diagnostic method for detection of bacteria were performed and after extracting the DNA, the multiplex PCR method has been used for determination of *Salmonella* serotypes.

Results

From all of the tested food samples (170), 1.7% of *Salmonella* contamination has observed that 1.1% related to typhimurium and 0.6% related to *Salmonella* enteritidis that had separated from beef, and during the tests conducted on samples that were in contact with food items, *Salmonella* contamination was not detected.

Conclusion

Results indicated that, quality control of food products in processing and production stages observing hygiene

issues are critically important in preventing food-borne diseases. And also the methods like molecular diagnostic such as multiplex PCR besides the cultivation of bacteria and other microbes can be helpful in diagnostic confirmation.

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Published: 4 May 2012

doi:10.1186/1471-2334-12-S1-P95

Cite this article as: Nosraty et al.: Detection of *Salmonella* enteritidis, typhi and typhimurium in foods by multiplex PCR in children hospital. *BMC Infectious Diseases* 2012 **12**(Suppl 1):P95.

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