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An outbreak of food poisoning after a major sport event: The role of PulseNet International

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Background: Food poisoning, are acute illnesses associated with the recent consumption of food and can be infectious or noninfectious. Infectious food poisoning is caused by eating food or water contaminated by bacteria, viruses, parasites or their toxins. Factors associated with *Salmonella* food poisoning outbreaks include consumption of inadequately cooked or thawed meat or poultry, cross-contamination of food from infected food handlers, presence of flies, cockroaches, rats, in the food environment that acts as vectors of the disease. Salmonellae reach food in many different ways; directly from slaughter animals to food, from human excreta, transferred to food through hands, utensils, equipment, flies etc. Foods commonly involved are animal derived foods such as meat and meat products, milk and milk products, egg and egg products. Outbreaks occur in different forms: Sporadic cases involving only one or two persons in a household; family outbreaks in which several members of the family are affected; large outbreaks are caused by a widely distributed infective food items; institutional outbreaks which may be caused by a contaminated single food item.

Methods: Salmonella Group D outbreak occurred in the community during September-November 2006, a second outbreak occurred in March 2007. In March – April 2007, 9 inpatients of Hamad Medical Corporation (HMC) developed infection with *Salmonella* Group D. *Salmonella* Group D was also isolated from 24 drivers working during the Sport event. As part of the investigation samples were collected from therapeutic Feeds, environment of therapeutic feeds section, raw chicken from Catering Dept. and raw chicken from Material Management Dept. (same batch).

Results: All isolated strains were identified as *Salmonella enteritidis*. To confirm their genetic relatedness PFGE was done; *Salmonella* isolated from Karwa Drivers, from the community, from HMC patients and from the Chicken were sent to Naval Medical Research Unit # 3 (NAMRU-3) for full identification and genetic analysis. To compare the strains with the strains of S. enteritidis of the country of origin of the chicken, strains sent to CDC to compare through PulseNet International.

Conclusion: As per our investigation this outbreak may be due to the following reasons: contamination during processing/packing at the company's premises, prolonged stay of patients feed outside the refrigerator and leftover food consumed by the drivers.

Biography

Sittana Elshafie is a graduate from the College of Medicine University of Khartoum in Sudan. She had her post graduate education in UK and worked as Consultant Microbiology and Infection Control for Sultan Qaboos University Hospital-Oman, Hamad Medical Corporation-Qatar, and Aspetar Hospital, Qatar. She is also an Associate Prof of Medical Microbiology in the University of Gezira, Sudan, College of Medicine, Sultan Qaboos University in Sultanate of Oman, and Weill Cornel Medical College in Qatar.

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