

## SHORT COMMUNICATION

## SALMONELLA INFECTION AMONGST FOOD WORKERS IN LAHORE

Sajjad Ullah, Saira Bashir\*, Akif Qasim\*

Centre for Applied Molecular Biology University of the Punjab, \*Pathology Lab Jinnah Hospital Lahore-Pakistan

This descriptive observational study was conducted at Pathology lab Jinnah hospital, Lahore, January 2013 to October 2015. We include all the food workers in different restaurants, slaughters, inn, recreation centre and bakeries of Lahore for the purpose to identify the salmonella infection, we used Typhoid IgG/IgM Rapid test device methods (Serum/Plasma), is a lateral flow chromatographic immunoassay technique were calculated. We analysed 1025 individuals, 62 (6%) were found positive for the said diseases out of which 14 (1.3%) IgG positive, 18 (1.8%) IgG IgM positive and 30 (2.9%) were IgM positive. All the individuals who were found positive were without signs and symptoms. Salmonellosis continues to be an important global cause of infectious intestinal disease and spread readily by means of food personnel, zoonotic and contaminated equipments and surface. The screening of the individuals who are silent carriers, help in controlling the spread of salmonella infection in the public.

**Keywords:** Salmonella, typhi, Food Workers; Lahore

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## INTRODUCTION

Salmonella induces illness and a common source of infection in animals and humans.<sup>1</sup> More than 2500 serotypes of Salmonella are known to cause disease.<sup>2</sup> Typhoid fever is a life-threatening illness which is caused by the *Salmonella Typhi* (strictly termed *S. enterica* sub-species *enterica serotype typhi*).<sup>3</sup> It was estimated in 2000 that approximately 2.16 million cases of typhoid occur worldwide and 2,16000 deaths and 90% of mortality and morbidity seen in Asia.<sup>4</sup> In our region *Salmonella Typhi* is one of the important cause of endemic fever followed by paratyphoid fever.<sup>5,6</sup> Typhoid and paratyphoid fevers are collectively termed as 'enteric fever' and these infections have great risk of epidemic spread.<sup>3</sup> We studied all the food workers in different slaughter houses, food spots Inn, restaurants and Bakeries of Lahore for the detection purpose we used Typhoid IgG/IgM Rapid test device (Serum/Plasma) as per kit instructions The attempt to analyse the food workers at different food spots from Lahore was successful. To determine the occurrence of Salmonella infection in food workers during the period of January 2013 to October 2015 and studied, all the food employees in different restaurants and recreations centres of Lahore, they were belonging to different age. We analysed 1025 individuals, 62 (6%) were found positive for the said diseases out of which 14 (1.3%) IgG positive, 18 (1.8%) IgG IgM positive and 30 (2.9%) were IgM positive. In positive individuals 22 (2.1%) were belonging to 20–30 years, 25 (2.4%) individuals 31–40 and 15 (1.5%) were belonged to 41–60 years.

Salmonellosis continues to be an important global cause of infectious intestinal disease and in developed countries maintains its dominant position as

one of the top three commonest causes of bacterial gastroenteritis. Many employees are working and contamination is possible when *Salmonella* or any other pathogen is present on the equipment or the workers' hands or clothing. Salmonellae spread readily by means of food workers, from animal hosts and directly from person to person. The progressive strengthening and production, distribution of our food supply, *Salmonella* can be very extensive, and their sources, deeply embedded. The screening of the individuals who are silent carriers, help in controlling the spread of salmonella infection in the public. The ability of healthy workers, slaughter and raw ground meat processing facilities to uphold the *Salmonella* performance standards should result in dramatic decreases in food-borne salmonellosis.

## REFERENCES

1. Anderson RC, Buckley SA, Callaway TR, Genovese KJ, Kubena LF, Harvey RB, *et al.* Effect of sodium chlorate on Salmonella Typhimurium concentrations in the weaned pig gut. *J Food Prot* 2001;64(2):255–8.
2. Centers for Disease Control and Prevention (CDC). Preliminary FoodNet data on the incidence of foodborne illnesses—selected sites, United States, 2001. *MMWR Morb Mortal Wkly Rep* 2002;51(15):325–9.
3. Threlfall J, Ward L, Old D. Changing the nomenclature of Salmonella. *Commun Dis Public Health* 1999;2(3):156–7.
4. Crump JA, Luby SP, Mintz ED. The global burden of typhoid fever. *Bull World Health Organ* 2004;82(5):346–53.
5. Hasan R, Zafar A, Abbas Z, Mahraj V, Malik F, Zaidi A. Antibiotic resistance among Salmonella enterica serovar typhi and Paratyphi A in Pakistan (2001–2006). *J Infect Dev Ctries* 2008;2(4):289–94.
6. Orchial RL, Acosta CJ, Danovaro-Holliday MC, Baiging D, Bhattacharya SK, Agtini MD, *et al.* A study of typhoid fever in five Asian countries: disease burden and implications for controls. *Bull World Health Organ* 2008;86(4):260–8.

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## Address for Correspondence:

Dr. Sajjad Ullah, Centre for Applied Molecular Biology, University of the Punjab, Lahore-Pakistan

Cell: +92 345 945 8089, Email: sajjad\_uhs@yahoo.com