The accuracy rate of laboratory reports of typhoid fever

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Abstract

Aims: Salmonellae organisms are a large group of enteric bacteria and their infections present an important public health problem worldwide particularly in developing countries. Regrettfully, Diagnosis and laboratory report of Salmonellae organisms is not performed correctly, due to a variety of reasons. This study was designed to determine the accuracy of laboratory reports of typhoid fever in Tehran during a two year period.

Methods: This descriptive study was carried out on clinical samples diagnosed as Salmonella typhi received from a number of hospital laboratories in Tehran in years 2007 and 2008. Bacterial strains were diagnosed and identified by standard differential biochemical and serology tests using poly and mono specific Salmonella antisera. Results were then compared to those reported from the hospital laboratories.

Results: Among 161 samples which were suspected to contain Salmonella typhi, 60 were reported as Salmonella typhi. Standard biochemical and serology test results revealed that although samples belonged to serogroup D of Salmonella, none of them had reacted with specific Salmonella antisera; therefore, all non-typhoidal group D Salmonella strains had been misdiagnosed as Salmonella typhi.

Conclusion: The precise laboratory identification of Salmonella typhi should be emphasized, because laboratory reports with misdiagnosed Salmonella typhi may prevent physicians from taking proper supportive and curative measures and impair the treatment process.

Keywords: Typhoid fever, Salmonella typhi, Non-Typhoidal Salmonella
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