

Serological Diagnosis of *Salmonella Typhi* in District Hospital Quarter of Charsadda 2015-16



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Abstract

Typhoid fever has a prominent as a perilous illness in Asia with almost 93% of worldwide cases has been underwrote by this region. Being a critical cause for an ailment and passing in creating nations where safe water supply, natural sanitation and sustenance cleanliness is not ideal. Typhoid remains a communicable disease found both male and female. It occurs due to the systematic infection of mainly via *Salmonella typhi*. An epidemiological model aimed at immediate and round about transmission of typhoid is planned and examined. The fundamental number is figured out. This cross-sectional study was carried out to determine the prevalence of typhoid fever in 4253 consecutive patients with fever and symptoms clinically compatible with typhoid fever to verify recent estimates of a high prevalence of typhoid fever in individuals living in the Charsadda. 923 patients show the positive result, 476 were males & 487 females in the total of 4253. The ratio of positive result is considerable higher in females as compare to men.

Keywords : Typhoid Fever; *Salmonella typhi*; Charsadda; KP; Pakistan

Introduction

Salmonella typhi is a Gram-negative, facultative anaerobic, rod formed in addition to motile through peritrichous flagella. *Salmonella* belong to family Enterobacteriaceae, medically is notorious pathogen for equally, animals and Human being [1]. In 2003 a study conducted that in Pakistan water-borne infections claim 250,000 deaths each year among, in which Typhoid fever is the principal cause [2]. Infection of *Salmonella* is common in summer months [3]. Worldwide ratio of typhoid fever is every year is 16 million disease and 600,000 passing cases. Enteric fevers cause 200,000 passing away and per year 22 million illnesses, with the highest incidence happening in Southeast and Central Asia [4,5]. Typhoid fevers remain mostly related with regions with high poverty and under development. *Salmonella typhi* is furthestmost likely to get in kids, age lower than five years [6,7].

Methods & Materials

To determine the prevalence typhoid fever, all cases diagnosed primarily as typhoid fever in DHQ (District Hospital Quarter) of Charsadda, from Jan 2016 to Dec 2016 estimated timing are one year. We athered blood from 4253 from patients both male & female, age limit from 6 to 70, primary, Secondary School level students, reproductive male & female included. From each, a proper and appropriate consent was taken & in the case of a child from his/her guardian at the time of specimen collection.

About 3cc blood collected through syringe venipuncture technique from patient & after proper clotting, serum was separated by centrifuge at 3000 rpm for five minutes, after this Typhidot® test kit was used to define IgG & IgM. Take out test card from foil bag and place it horizontally, 10µl add of complete blood/serum on S (Sample) point afterward this sample is entirely absorbed then, enhance two droplets of dilute provided with the assay to the sample hole. 15 minutes postponement and understand results, where the control band does not seem, are considered the invalid result.

Results

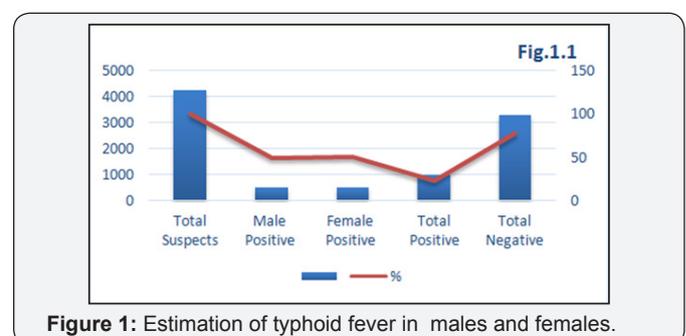


Figure 1: Estimation of typhoid fever in males and females.

In this study suspect, patients were enrolled. The age of subjects ranged from six to seventy years. Suspected patient's serums were verified for the detection of typhoid fever IgM & IgG antibodies. The test revealed that in total 4253 patients. Test

displayed that 963 were show result Positive and 3290 displayed the Negative result. In 963 positive results, 476 were males & 487 females. It's mean according to this paper ratio of typhoid in the female is large and increase as compared to men ()

In Month wise infection we also calculated Typhoid fever, there is little bit increase and decrease occur in infection both males and females due to some climatic changes, but the ratio of Typhoid fever is more estimated and testified in the month of May as compare to the other months (Table 1).

Table 1: Calculation of month wise infection of typhoid fever.

Month	Total Suspects	Total +vie	Total -vie	Male +vie	Female +vie	Total
January	379	141	238	62	79	4253
February	340	103	237	49	54	
March	410	159	251	75	84	
April	327	84	243	35	49	
May	529	102	427	63	39	
June	429	65	364	37	28	
July	344	66	278	25	41	
August	312	46	266	20	26	
September	275	42	233	27	15	
October	290	58	232	39	19	
November	310	55	255	29	26	
December	308	42	266	15	27	

Discussion

Typhoid is one the real pushed in Khyber Pakhtunkhwa, in the present study, we found females suffering predominantly as compared to men, comparable finding a report concentrate on Khyber Pakhtunkhwa and in opposition to finds of research report completed in Iran [8]. One of the conceivable reasons why females are more influenced than men are that as youngsters are more helpless to typhoid disease thus typhoid minding obligations of women make them extra vulnerable to tainting [9]. Typhoid fever is still predominant in country territories are inferable from the lack of safe drinking and supply of water, cleanliness is poor and sullied nourishment. Typhoid fever is a standout amongst essential irresistible illnesses of South East Asian nations like Pakistan as it has been in charge of bringing about an extraordinary rate of hopelessness and mortality in this nation. Numerous cases have been accounted for all through the entire year. Like other Asian countries; typhoid fever can be a critical pointer of the financial state of the populace [10]. Sarwari & Sulaiman in 2007 reported about the worldwide the most notorious hotspots for typhoid fever are Pakistan, India, Nepal, Peru, Indonesia, Egypt and Mexico [11].

Keeping in view the consequences of this study it can be incidental that legitimate provided of hygienic drinking

water, better sewerage framework and inoculation, alongside authoritarian ordering and appropriate focusing of the helpless age gatherings, is thought to be a powerful tool in controlling this ailment in Khyber Pakhtunkhwa Pakistan. Remain that as it may, this is insufficient we have need of better arranging and destruction projects to defeat this malady in the capital city as well as all through the Pakistan [12-14].

Conclusion

Based on the above findings, it may be concluded that higher incidence of typhoid fever was found, especially in women which is the very responsible for the family and majorly play a Pivotal role in the life of her children. So Villager of Charsadda, the area of Distt Mardan who consumed unsafe water and food from sources.

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