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Prevalence of Typhoid Disease in South Darfur State - Sudan Data Compared from 2009 to 2013

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Abstract

This is a descriptive analysis approach study, aims to underline Typhoid disease in South Darfur community - Sudan to inform policy-makers about fact status to put preventive plan and interventions against typhoid, including vaccinations. The DATA were collected by the Federal Ministry of Health (FMOH) in South Darfur State from January 2009 to December 2013, the total number of reported cases were (5259 cases), included both the inpatient and the outpatient cases, however mortality cases were excluded in the outpatient report due to some difficulties in collecting the data but were reported in the inpatient for the total of 25 cases. The data showed that the inpatient incidence represented less than third of the total incidence of typhoid disease during this year. Where the outpatient took the other two third prevalence. The female represented more than half of the total cases and the age group was below 25 years had the commons incidence.

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1.Introduction:

Typhoid fever is also called enteric fever has classical feature includes fever, malaise, cause constipation and abdominal pain. And if not treated the symptoms can complicated to delirium, intestinal bleeding and perforation which eventually lead to death. Typhoid fever, caused by Salmonella enterica serovar Typhi (S. Typhi), is a disease transmitted by the faecal-oral route. It continues to be a public health problem in many developing countries in sub-Saharan Africa. Affecting school-age children, especially those from poor resourced settings with inadequate water supply and proper sanitation systems, are disproportionately affected (Kariuki 2008). The disease is one of the most common worldwide infectious problems, estimates for the year 2000 that there were approximately 21.5 million infections and 200,000 deaths from typhoid fever globally each year. Making the disease one of the most serious infectious disease threats to public health on a global scale (Mweu 2008). Despite the fact that the disease trend was supposed to decline with an estimate of a decade ago to reach half of the total presented cases indicated earlier on this report however, the disease trend is still very high which require major efforts to be tackled. Therefore, the disease is still considered to be a major health problem especially in developing countries which were shown in more recent studies. It is estimated that a total of 400,000 cases occurred annually in Africa, an incidence of 50 per 100,000 persons per year (Kariuki 2008). The sanitation system is the key control of the disease, where No access to safe water is an important risk factor for typhoid fever,(Mogasale V, Maskery B, Ochiai RL,et al 2014) , beside the poor treatment which may be due to inadequate treatment supply in poor , communities because to missing proper diagnosis which might lead to more ,spread of the disease. Lack of effective diagnosis often leads to inappropriate treatment and, management of these infections. Additionally, the emergence and spread of S. Typhi strains having multiple resistance to nearly all commonly, available drugs in most developing countries has been a major challenge to health care systems (Kariuki 2008). The initial symptoms on presentation ,of diarrhoea and vomiting frequently led to a misdiagnosis of gastro-enteritis) Seebaran AR, Coovadia YM, Bhana RH, Rajput MC, Naidoo BT, Haffejee IE 1990). Bone marrow cultures remain the most effective method for the recovery of S. typhi. Stool cultures appear to be more effective in children than in adults Vallenas C, Hernandez H, Kay B, Black R, Gotuzzo E 1985) the complications are various according to the quality of the management an age of the patient. However, in children the complications are rare a child was reported with typhoid glomerulonephritis,

presented with fever, gastrointestinal symptoms, edema, hypertension and abnormal urine findings including microscopic hematuria and proteinuria. (Pancharoen C, Wongsawat J, Phancharoen S, Thisyakorn U 2001). expected to decrease the burden of typhoid fever (Spotarenko SS, Spotarenko RV 1977) , Improving quality of drinking water must be a priority and health education strategies targeted at individuals with no schooling, and contacts of patients, would be expected to decrease the burden of typhoid fever (Tran HH, Bjune G, Nguyen BM, Rottingen JA, Grais RF, Guerin PJ 2005)

2. Study Objectives:

The objectives of this study is to 1. Aim to underlying typhoid disease in South Darfur community

2. To explore Prevalence differences between the gender and age groups

3. To highlights the need of awareness in camps settings regarding the typhoid disease

4. To show and understand the large differences of the disease between the inpatient and outpatient.

3. Methodology:

The relies on descriptive method of data collected in South Darfur State hospitals and health centers in both rural and cities health facilities, include 13 health centers and hospitals around the entire state, the data were Collected between the period of January 2009 to December 2013 , in total 5259 patients data were collected in different age groups from one year old to above 44 years, in both sex, the data were collected by the hospital administrative staff form in the outpatient and inpatient registration books of the hospital which contained history taken from patients in addition to lab reports which showed the type of investigation use to diagnosis the typhoid disease, and rang from normal routine investigation of the blood count to the specific test of the S.typhi , bacterial culture and other probable diagnosis for other infection like malaria , the abundant bacterial type of typhoid disease which is isolated was salmonella typhi.

4 Results

The study found that, the total reported cases of all morbidity in south Darfur community between the year 2009 to 2013 are 165225 cases , and the total number of typhoid during the same years are 5259 case , in which represent about 3.2% from the all reported cases. Figure 1 shows an increase of the typhoid disease with time, and slow variation in the last years. 66.7% increase in cases in 2013 than the first year of the study 2009.

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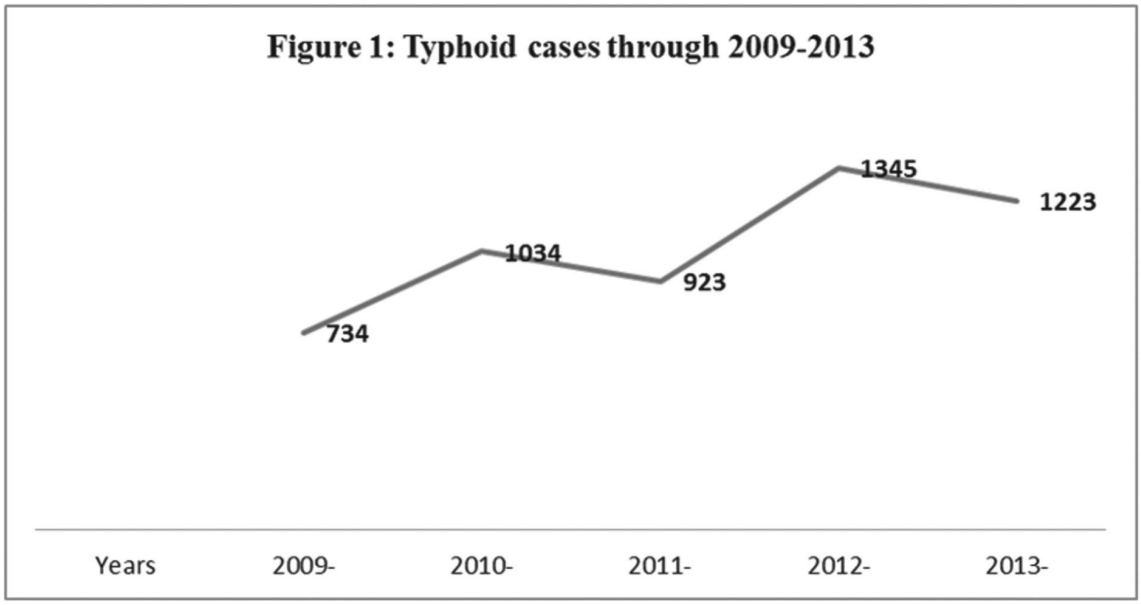

Table(1) shows positive cases of typhoid in 2010, data collected from all lab department in all hospital, the data shows that 60% of the cases coming from two hospital (Niala and buram), we also found that 8 out of 10 cases in Tulos hospital are positive which indicate high prevalence, in other hand Rhied ALbRDY hospital data show less positive cases only 2%.

Table(1): Typhoid positive cases, all health facilities 2010

Hospital	cases	Positive	%
Niala	620	186	30.0
Kass	90	17	18.9
Eid Alfursan	57	16	28.1
Rhied ALbRDY	304	6	2.0
Buram	391	309	79.0
Tulos	216	163	75.5
Italian	18	12	66.7
Alnahda	32	26	81.3

Looking for table (2) Typhoid incidence, the data shows that inpatient represented only 26.7% of total cases while outpatient represents 73.3% of the total incidence. The male represent 46.9% of the total reported cases while female represent 53.9%, respect age distribution we found that group less than 25 year represent about 44.6%, while the age group between 25 and 44 year represent about 34.7%. The mortality rate shows 5 cases for every 1000 patient.

Table(2): Typhoid incidence cases, all health facilities 2009-2013

Variables	Inpatients	Outpatients	Total
Gender			
– Male	679 28%	1779 72%	2458
– Female	743 27%	2058 73%	2801
Age Groups			
– Less than 25	632 25%	1883 75%	2515
– 25 to 44	493 29%	1206 71%	1699
– 44 and above	297 29	748 71%	1045
Incidents	1397 27%	3837 73%	5234
Mortality	25	Not recorded	

Conclusion:

* Tulos hospital has the highest Typhoid prevellance in the state of south darfur
* Most of typhoid cases in the age group less than 25 years
* There is no significant different between gender regard the typhoid prevellance
* Detath rate in south darfure state due Tyohiod is 5 cases of every 1000 patients

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