

**THE CONSIDERATION OF WATER AND FOOD AS THE  
MAIN SOURCE OF TYPHOID FEVER TO THE HABITATS  
OF KATUBA QUARTER IN KAMINA HAUT-LOMAMI  
PROVINCE**

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**ABSTRACT**

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This article investigates into=the consideration of water and food as the main source of typhoid fever to the habitats of katuba quarter in Kamina Haut-Lomami Province (DRC). It is basically a library and documentary researches, and it focuses on written tasks : such as different document consulted on the matter of typhoide fever that people of Katuba faced in water and food.

The aim of this article is to help readers of this paper understand the source of this diseas. It was suggested that, physicians and nurses find a solution to this problem that can permit people live safe and quiet.

**I.INTRODUCTION**

This article investigates into one aspect which is= consideration of water and food as the main source of typhoid fever that kills people day after a day in Katuba quarter in Kamina.

This article has had as specific objectives to study the frequency of typhoid fever in Katuba area, the reasons for consultations, management in case

of typhoid fever and the evolution of patients with typhoid fever in some hospitals and health centers in Katuba quarter.

**Typhoid fever** : Typhoid fever also called enteric fever is caused by salmonella bacteria. Oxford dictionary (2009 :1596), defines the word typhoid as a serious infectious diseases, red spots on the chest and severe pain in the bowels and sometimes causes death.

Pearson (2010 :966) defines the word typhoid as a serious infectious that is caused by dirty food or drink.<sup>1</sup>

*Examples : cassava leaves, dry fish, fresh meat, water from the well, lakes, rivers and streams.*

**Water** : A clear liquid, without colour or taste, which falls from the sky as rain and is necessary for animal, people and plants for life. According to oxford dictionary, water is a liquid without colours, smell or taste that falls as rain, in lakes, rivers and seas, and is used for drinking, washing, etc...<sup>2</sup>

Cambridge mini dictionary (2011) ends by saying, water is the clear liquid that falls from the sky as rain and that is in seas, lakes, and rivers.<sup>3</sup>

**Food** : Pearson (2010 :347), defines the word food as things that you eat.<sup>4</sup> Food is something that people and animals eat, or plants absorb, to keep them alive. A person who loves food and is interested in different types of food is called a foodie.**Fever** : Cambridge (2011 :142), defines the word « fever » as a high body temperature that happens because some one is ill.

Oxford dictionary (2005 :463), defines the word fever as a medical condition in which the body temperature is higher than usual and heart beats very fast.<sup>5</sup>

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Fever : pearson (2010 :327) defines the word fever as an illness in which you have a very high temperature.

**Habitat** : the natural surroundings in which animals, persons or plants usually live. Oxford dictionary (2005 :572). In short, the habitat is the natural environment in which a plant or animal lives.

**Quarter** : a quarter is an area of a town where a particular group of people live or work or where a particular activity happens.

- *Why do people of Katuba quarter died of typhoid fever ?*
- *Which kind of water and food are they using ?*
- *Why water and food are considered as the main source of typhoid fever In Katuba quarter in Kamina ?*

❖ ***Symptoms of typhoid***

Salmonella typhilives only in humans. Persons with typhoid fever carry the bacteria in their blood stream and intestinal tract. Symptoms include : prolonged high fever, fatigue, diarrhoe,headache, nausea, abdominal pain, and constipation. It can be confirmed through blood testing.

## **A. TREATMENT OF TYPHOID**

Typhoid fever can be treated with anti biotics. Antimicrobial resistance is common with like lihood of more complicated and exensive the most affected regions.

It is important for people being treated for typhoid fever to do the fallowing :

1. Take prescribed antibiotics for as long as the doctor has prescribed.
2. Wash their hands with soap and water after using the bathroom and avoid preparing or serving food for other people.

### ❖ *Preventions of typhoid*

Typhoid fever is common in places with poor sanitation and a lack of safe drinking water. Access to safe water and adequate sanitation, hygiene among food handlers and typhoid vaccination are all effective in preventing typhoid fever.

The following recommendations will help ensure safety while travelling :

- Ensure food is properly cooked and still hot when served.
- Avoid ice unless it is made from safe water.
- Wash hands thoroughly and frequently using soap, in particular after contact with pets or farm animals, or after having been to the toilet.
- Wash fruits and vegetables carefully, such as Mango, Orange, Guava, Cassava leaves, cauliflower, potato leaves, etc.. before eating them.

People of Katuba quarter die from typhoid fever because they don't take care of their food and water as it is previously. They eat food without washing hands and drink unprotected water. (dirty water)

They drink water from ordinary well without boiling it, no drugs such as a « quatabs », lakes, and small rivers such as mudji, Sobongo, Ntumba, lovoyi, etc..

About food, they don't protect their food, sometimes you may find flies ; crochets, and small insects playing on and around food such rotten meat, fruits, birds, fish, grasshoppers and other leaves. Water and food are considered as the main source of typhoid fever because they contribute to the life of living things and persons.

The purpose of our research article is to help habitats of Katuba and other quarters of Kamina to be aware of this disease that kills people because of

not taking care of their live in matter of water and food which are considered to be the main source of this diseas.

Talking about typhoid fever, we have visited different areas ; hospitals, health centers in Katuba quarter and found that a most of people who were considered as input patients were suffering only from typhoid fever. To day typhoid fever is known to be one of the dangerous diseas for the people living in this quarter. The reason is that ; they don't have water tap that could provide for them good quality of water. Sellers of food in the market do not protect their goods, people buy food contaminate already and eat without arranging them nor taking care of them.

It was difficult for us to discover why people are dying and from which diseases are they dying too. Through our investigation, we have discovered that people were and are dying from typhoid fever.

## **II.METHODOLOGY**

Thanks to the descriptive method and an interview as a technique which give us a clear description of typhoid fever in some hospitals and health centers such as « Bumi, Shungu, Katuba I, Katuba II, Katuba III, Katuba IV, » where patients were observed.

This method helped us to identify the symptomd and signs of this diseas. Talking about an interview, we were asking nurses and physicians we met at the hospitals and health centers.

## **III.RESEARCH AREAS**

Our research was centered on Katuba quarter where cases were observed. We visited more than seven health centers and hospitals. Such as health center Uzima, Katuba I, Katuba II, Katuba III, Katuba IV, Bumi hospital and shungu.

#### IV.GEOGRAPHICAL SITUATION

Geographically speaking, Katuba quarter in all is located in Kamina town in Haut-Lomami Province in the Democratic Republic of Congo. It is limited with :

- *At the north : By Kamina river (Luyi)*
- *At the south : by dino street*
- *At the east : by du stade street*
- *At the west : by lubilanji street*

This quarter is well arranged in streets. Uzima is between de la police and Mwanza or mwanza and Kivu ; health center Katuba I is between Lovoy and Kabongo, Katuba II is between du Zaïre and Kivu, Katuba III is between Dino and Ilunga Mbidi, Katuba IV on du Zaïre street. Bumi is between Kilubi and lusambo. The population of this quarter lives poorly, the workers are few, only the fields which saves alot of them. Twey don't have good physicians in tweir hospitals.

#### V.RESULTS

Look at this chart that illustrates health centers and hospitals where our research was done or visited :

##### V.1 BUMI HOSPITAL

##### V.1.1 Age of patients

*Chart 1*

| Age   | Number | Percentage |
|-------|--------|------------|
| 17-22 | 4      | 10,2       |
| 10-16 | 3      | 11,5       |
| 6-10  | 6      | 37,5       |
| 10-15 | 5      | 20         |

After collecting the data, we have seen that people from 17-22 were simply 4 that gives 10,2 from 10-16 only 3 that gives 11,5%, from 6-10,6 that gives 37,5% and finally we found from 10-15 only 5 who were suffering of typhoid fever that gives 20%

### V.1.2 SEX OF PATIENTS

Chart 2

| SEX          | NUMBER    | PERCENTAGE |
|--------------|-----------|------------|
| MASCULIN     | 23        | 35,4       |
| FEMININE     | 42        | 64,6       |
| <b>TOTAL</b> | <b>65</b> | <b>100</b> |

The above Chart shows the sex of people visited in Bumi Hospital. Masculine 23 that gives 35,4%, and feminine 42 that gives 64,6% out of 100

### V.1.3 HOSPITALS AND HEALTH CENTERS

Chart 3.

| HOSPITALS ET HEALTH CENT | NUMBER    | PERCENTAGE |
|--------------------------|-----------|------------|
| BUMI                     | 13        | 21,7       |
| KATUBA I                 | 9         | 15         |
| KATUBA II                | 11        | 18,3       |
| KATUBA III               | 10        | 16,7       |
| KATUBA IV                | 10        | 16,7       |
| UZIMA                    | 7         | 11,6       |
| <b>TOTAL</b>             | <b>60</b> | <b>100</b> |

Talking about the Chart N°3 of hospitals and health centers, we have remarked that Bumi hospital has only 13, that gives 21,7% Katuba I with 9 that give 15% of people suffering with typhoid fever, Katuba II, only 11, that gives 18,3, Katuba III with 10 that gives 16,7 with Katuba IV, with the same percentages but Uzima with 7 that gives also 11,6

## V.2 KATUBA I HEALTH CENTER

### V.2.1 AGE OF PATIENTS

*Chart N°1*

| AGE   | NUMBER | PERCENTAGE |
|-------|--------|------------|
| 12-15 | 6      | 22,2       |
| 16-19 | 8      | 22,8       |
| 20-25 | 19     | 42,2       |
| 26-31 | 17     | 29,8       |

Going straight to Katuba I health center, we have remarked that alot of people who were suffering from typhoid fever were in according to their ages ; we found from 12 to 15 of age 6 patients which gives 22,2%, from 16 to 19 of age, 8 patients which gives 42,2% finally from 26 to 31 of age 17 which gives 29,8%.

### V.2.2. SEX OF PATIENTS

*Chart N°02*

| SEX       | NUMBER | PERCENTAGE |
|-----------|--------|------------|
| MASCULINE | 27     | 54         |
| FEMININE  | 23     | 46         |

The second chart of our investigation shows the number of sex met in the hospital, masculine 27 that represents 54% and 46 Feminine that gives 46%



### V.2.3. RECOVERED FROM TYPHOID FEVER

| SEX       | NUMBER | PERCENTAGE |
|-----------|--------|------------|
| MASCULINE | 6      | 12%        |
| FEMININE  | 7      | 14%        |

About recovery, we have remarked that the center didn't do any work, out of 27 patients only 6 who were cured and gives 12, but 7 out of 23 of feminine sex were also cured and represents 14%

### V.3 KATUBA II HEALTH CENTER

#### V.3.1 AGE OF PATIENTS

Chart N°1

| AGE   | NUMBER | PERCENTAGE |
|-------|--------|------------|
| 10-12 | 11     | 50         |
| 14-16 | 9      | 30,3       |
| 21-23 | 8      | 18,1       |

The Chart has given us a clear details on age of patients met in Katuba II health center, From 10 to 12 only 11 that gives 50% and 14 to 16 just 9 and gives 30% finally 21 to 23 we found 18,1%

#### V.3.2 SEX OF PATIENTS

Chart N°02

| SEX       | NUMBER | PERCENTAGE |
|-----------|--------|------------|
| MASCULINE | 14     | 23,3       |

**FEMININE** | 14 23,3

The above chart shows the number of sex of patients met in the health center of Katuba II, 14 Masculine that gives 23,3 and 14 Feminine that gives 23,3

**V.3.3. RECOVERED FROM TYPHOID FEVER**

*Chart N°03*

| RECOVERED | NUMBER | PERCENTAGE |
|-----------|--------|------------|
| MASCULINE | 4      | 6,6        |
| FEMININE  | 10     | 16,6       |

About recovery, we have found that out of 14 patients of Masculine sex who wen’ suffering from typhoid fever only, 4 who were cured and gives 6,6% and 10 out of 14 of feminine and gives 23,3%

**V.4. UZIMA HEALTH CENTER**

**V.4.1 AGE OF PATIENTS**

*Chart N°01*

| AGE   | NUMBER | PERCENTAGE |
|-------|--------|------------|
| 13-17 | 12     | 40         |
| 19-21 | 3      | 15         |
| 25-26 | 7      | 11,6       |

This Chart represents ages of patients visited in the hospital, the first raw shows the age of 13 to 17, we found the number of 12 and 40 as a percentage (%), from 19 to 21 only (3) patients and gives 5% finally 25 to 26 (7) patients wich gives 11,6%

**V.4.2 SEX OF PATIENTS**

*Chart N°02*

| RECOVERED | NUMBER | PERCENTAGE |
|-----------|--------|------------|
| MASCULINE | 12     | 20%        |
| FEMININE  | 10     | 16,6%      |

This Chart shows the number of sex patients met. In this health center of Uzima, we found (17) Masculine sex and corresponds to 28,7 and 10 Feminine that gives also 16,6%

#### V.4.3 RECOVERED FROM TYPHOID FEVER

*Chart N°3*

| RECOVERED | NUMBER | PERCENTAGE |
|-----------|--------|------------|
| MASCULINE | 10     | 20%        |
| FEMININE  | 13     | 21,6       |

Talking about recovery, among 37 patients observed in this center only 10 who were cured that gives 16,6 and 13 out of 13 of feminine were cured and gives 21,6

#### V.5 KATUBA III HEALTH CENTER

##### V.5.1 AGE OF PATIENTS

*Chart N°1*

| AGE   | NUMBER | PERCENTAGE |
|-------|--------|------------|
| 20-21 | 12     | 29,2       |
| 25-30 | 7      | 12,7       |
| 33-36 | 2      | 2,8        |
| 40-41 | 3      | 3,7        |

The above Chart shows the age of patients met at Katuba III health center, from 20-21, 12 patients that gives 29,2, from 25-30, 7 patients the result is

12,7%, from 33 to 36,2 patients and gives 2,8% finally, from 40 to 41,3 patients that gives 3,7%

### V.5.2 SEX OF PATIENTS

Chart N°2

| SEX       | NUMBER | PERCENTAGE |
|-----------|--------|------------|
| MASCULINE | 10     | 16,7       |
| FEMININE  | 14     | 23,3       |

This center has 10 men, that could give 16,7 and 14 women, that give 23,3%

### VI.DISCUSSION THE RESULTS

Talking about Bumi hospital, we have remarked that among the number of patients who were inside the wards, no one was cured from typhoid fever to mea nit has not specialist physicians or nurses who may help people get better, as the results zero, about Katuba I health center age of patients from 12 to 31 gives the number of 50,27 men and 23 women, 6 of men were cured and 7 of women were cured too. That gives 12% to 14% so this center is abit helping people in treating typhoid fever, Katuba II had 28 patients boys and girls too, from 10 to 23, 11 boys which gives 50% from 10 to 12, and 9 which gives 30 from 14 to 16 and 8 that gives 18,1 from 21 to 23, cured 4 boys and 10 of girls that gives 6,6% and 16,6%.

About Uzima health center, age from 13 to 17, (12) patients that gives 40% and from 19 to 21 (6) patients that gives 15% and to 26 (9) that gives 17,6% among 22 we had 12 men and 10 women all cured from typhoid fever so this health center had specialist physicians and nurses.

About Katuba III out of 24 a in all, we suspended 10 men who were suffering and 14 women were suffering too. Men gave 16,7% and 23,3 of women. Concerning the results, we find that no one was cured from this health center. To mean there is no specialist physicians and nurses.

## VII. CONCLUSION

My own experiences in analysing the results collected in different health centers and hospitals in which the typhoid fever was observed, we have found that really people are suffering and dying from typhoid fever young, and old, masculine and feminine.

These health centers and hospitals were observing a lot of people in their hospitals without giving a solution to their serious problems, some did a work in curing and some didn't do

## VIII. SUGGESTION

Our suggestions go straight to the government of our country which is the Democratic Republic of Congo and the organ in charge of health to take care of people so that we may save from different diseases such as cholera, malaria, typhoid fever and so on.

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