Prevalence survey of cholera in Zahedan in 2013

Tahreh Norouzikoh*, Arezoo Haratimirzai, Fatmeh Farahi, Raziteh Bolagh, Sakineh Mirzendehdl, Mohammad Sadegh Bagheri

University of Medical Sciences, Zahedan health center, central laboratory
A.harati54@gmail.com

Abstract: Cholera is a diarrhea disease in tropical areas, which is caused by a bacterium called Vibrio cholera. That exclusively infect humans, symptoms are caused by toxins secreted by bacteria in the gut is. Disease transmission through contaminated water & contaminated vegetables & fruits. Vibrio is a range,75% of people infected with vibrio are ni signs of the disease, 20% have diarrhea &2 to5% with infectious diarrhea, womiting & dehydration even 70%, if you don, t compensate for the water lost would be lethal. The purpose of this study emphasize the importance of social & health epidemic & work to prevent the spread of cholera. On 536 stool samples from patients suspected of having cholera, specific culture was. Enrichment, chemical tests & serotype, biotype INABA was isolated. Epidemiological data in Excell entered, variables selected for the study included: gender, age & nationality were analyzed using Spss soft wre. 75 cause's vibrio cholera biotype Inaba was isolated. 73 men 97% & 2 women 3% & 72 Afghans 96% & 3 Iranian 4%. Pationts age was 13-70 yr, 68% of patients in the active age (15-25 yrs). Because of lake of clean water & proper sanitation & poor rural areas without piped water & sewer system are condusive to the spread of cholera. Appropriate to prevent epidemic of cholera, safe water, ultimately monitor & control the production & distribution of food.
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1. Introduction

Cholera is an acute intestinal bacterial disease with symptoms that fast and smooth stool, watery, painless occasional vomiting starts The rapid decline in untreated patients dehydration, acidosis, circulatory collapse, hypoglycemia (low blood sugar levels) in children and kidney failure and ultimately fatal disease Causing agent called Vibrio cholerae is a Gram-negative bacilli. More serogroups) serogroup O139 (and O1 are the germs that cause the disease. (Macy et al., 2005) Serogroup O1 is the major cause of epidemics. Vibrio cholerae O1 includes classic Latour biotypes that each have a variety of serum) serotypes (Inaba, Ogawa and is rarely Hykvjyma. Azbrvz clinical cases of asymptomatic infection secret and more.) James, 2001) This reservoir of the infectious agent in humans. A recent survey in the United States of America, Bangladesh and Australia have clearly shown that Vibrio in shellfish tanks of salt water and estuaries there Vplanktvn. The disease becomes endemic in some areas occasional epidemics will rise. Including the outbreak of this disease can be a particular explosive epidemic in July 1994 Goma on the Rwandan refugees in Zaire was noted that approximately 70 thousand with 12 thousand deaths in less than a month left. (Macy et al., 2005; James, 2001) Its strength in communities with large numbers of people without treatment, which can be destroyed within a few hours of life, the disease has made an international threat. (Center for Disease Control & Management, 1999) The microbes in the history of the gruesome epidemic of diarrheal disease is still a major national health problem in Africa, Asia and Latin America) Hashemi et al., 2011. (Bangladesh, Burma, Indonesia, the Philippines, Thailand and China's central plains have Jz'kanvn endemic disease, but it is endemic in these areas are usually short-term in nature and generally outside the India has been stationed permanently. Depending on climatic conditions the disease in endemic areas during certain seasons of the stalk depends on its age. In Bangladesh endemic cholera infections often in children caused milder disease at an early age, but the disease has also been reported in neonates six weeks. Pollution in areas that previously had not observed any difference in terms of age. Most Parts of our country and in most cases cholera is not endemic to focus on Iran's eastern borders. In the 1344 epidemic disease was imported from neighboring countries and from Torbat the city of Sistan-East And Baluchestan, Kerman, Golestan was released. Aksrshhrhay epidemic in 1356 infected in the northern regions of Azerbaijan, Khorasan and Mazandaran, respectively. In the 1377 epidemic disease widely Not predict. (Holakouee et al, 1998, Rodrigo et al., 2000).

Microbial properties of cholera

Vibrio cholerae survives in clean water for about a week. Abe disease in organic matter or infected with

a disease about a month and the salty sea water to survive several years. When the temperature is above 20 ° C ambient temperature, salinity and nutrients are suitable for microbial growth, rapid growth of Vibrio cholerae find and disease pathogenesis will be too. This explains keep rotating the disease during the cold season and their reappearance in the heat. Importantly, the ability to survive in the transmission of cholera Vibrio cholerae in the environment and even ice glaciers that if contaminated water, is used to produce ice, could be affected consumers in cholera. Although cholerae is susceptible to disease, drought or heat and is destroyed, but can survive in foods such as vegetables 4 days. Thus people who have used antacids more than others are at risk of cholera. Vibrio cholerae can be amplified in the small intestine and produce toxin, the toxin causes plenty of water and Salts from the blood to flow into the intestine illness and disease are diarrhea disposal. These germs cause disease, damage and injury to the intestinal wall does not usually cause fever and dysentery together To be seen. Abe major reservoir for cholera disease is superficial, and the spread of the epidemic are common, contaminated water and contaminated food. Although humans accidentally disease by consuming water contaminated with disease, but can infect primary role Play in the spread of the disease cycle because eating contaminated water or food, human feces disease is the most common way of contracting the disease this disease. The disease is unknown reasons, people with blood group O blood group AB highest risk and have the least chance of getting a disease of the disease. And the prevalence rate is higher in men than women. Vibrio cholera late summer to mid-October with active cooling air, and it cannot be said to contain the disease. In endemic areas the disease is more common in summer and autumn. Cholera in endemic areas But when the disease is mainly a disease of children into adult population and children equally caught the disease (Environmental Health Site, Site Doctors without Borders).

Signs and symptoms of cholera

Cholera, a wide clinical spectrum. Almost 75 percent of people who are infected with Vibrio cholerae, have no signs of disease. 20 percent are suffering from diarrhea, diarrhea can be caused by other organisms Not differentiate. In a small number (2 to 5 percent) of people with infectious diseases, diarrhea, vomiting and dehydration from occurring. Symptomatic with cholera massive watery diarrhea without fever or abdominal tenesmus begins. Stool Patients with cholera, the disease appears transparent liquid smeared white mucus stool is called "water - rice" and is usually odorless or slight odor of fish. Vomiting, which can be severe and painful cramps in the legs are common symptoms. In severe cases, tenesmus stomach or pain in the hands and feet may be present. Severely ill cholera patients may be up to 10 percent of their body weight through vomiting and diarrhea lose. In very severe cases of fluid loss can be up to one liter per hour for 24 hours to reach early.

Transmission of cholera

Cholera is transmitted through fecal - oral. Since more than one million organisms required to cause disease, cholera is transmitted exclusively through contaminated food or water. By direct person-to person transmission of disease, such as patient contact is rare. Water may be contaminated at its source. Surface water and water from shallow wells are common sources of infection. In addition, Vibrio cholerae can live in aquatic environments for many years. Most cases of water pollution in the home, when the water is caused by the washing with water stored contacts. Bathing or washing utensils in contaminated water can also transmit cholera. Moist grains such as rice, millet, corn, when served at room temperature or lightly see, the diseases are common vehicles for cholera transmission. Wet foods that have been contaminated after cooking slightly and remain at room temperature for several hours.

Prevention of cholera

- Wash hands with soap and water after each activity continued compliance with this point at least 30 seconds with soap foam is impregnated.
- Use safe water (chlorinated water networks) and in the absence of disease networks using bottled water.
- In case of lack of access to safe water sources of the disease boil water for one minute at sea level due to illness in the absence of disease chlorinated water (spring water) and add some lemon juice to disease non-chlorinated drinking water can be acidic environment to deal with the cholera bacteria.
- Complete call control and care of patients with cholera; someone to give the patients the disease may be up to 5 days without any symptoms of this infection vector is To be determined. The microbes two weeks after the Bymarybvdy may remain in the feces of a person and the person carrying the disease. Despite the fact that the Bymarybvd was.

The microbes can survive in sweat up to three weeks, then at least one month must take special care of individual patients.

- Clean, parasite removal, disinfection and washing fruits and vegetables.
- Preferably use the fragrant fruit that are on the skin.
- Non-use food (especially seafood) raw and undercooked.
- Limit travel, especially to places with suspected cholera disease.

- Preparation of non-packaging to avoid public places.
- Failure to buy feed and food from street vendors.
- Avoid unpasteurized juice and ice cream.
- Do not use water for drinking water installed in public places for ice cold water directly from the format used (Environmental Health site).

2. Materials and methods

On 536 samples (Stool) taken from patients with suspected cholera were given special culture for Vibrio cholerae and then Tnjam enrichment stages, early detection, Chemical tests and servo Tapyng biotype of Vibrio cholerae inaba was isolated. Information outbreak in Excell program is compiled and analyzed using Spss software. Variables included age, sex and type of descriptive and analytic study is Vmlyt.

3. Results

Biotype of Vibrio cholerae inaba isolated 75 cases, 73 males (97%) and 2 women (3%), 72 Nfz of patients with AF (96%) and 3 cases of Iran (4%) They were.

Minimum age of patients was 13 years and maximum age 70 years, 68% of patients in the active age of 15-25 years.

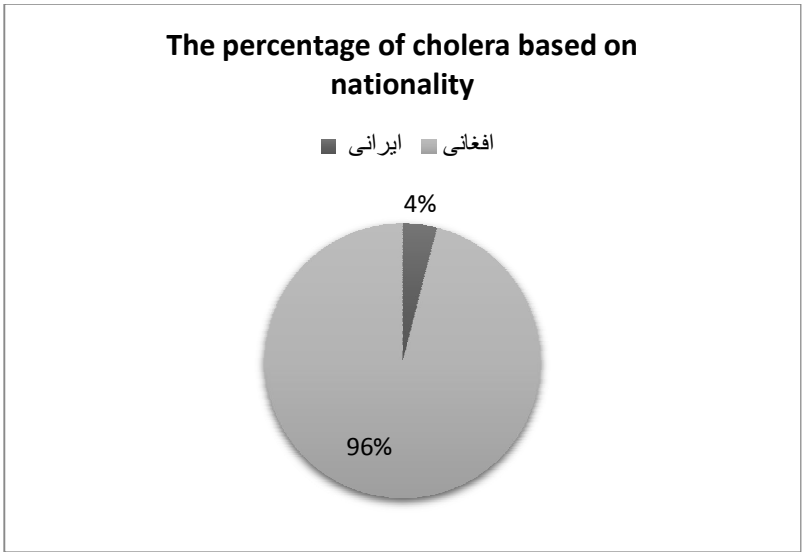

Figure 1. Cholera cases on the basis of nationality in Sistan-Baluchistan province in 1392

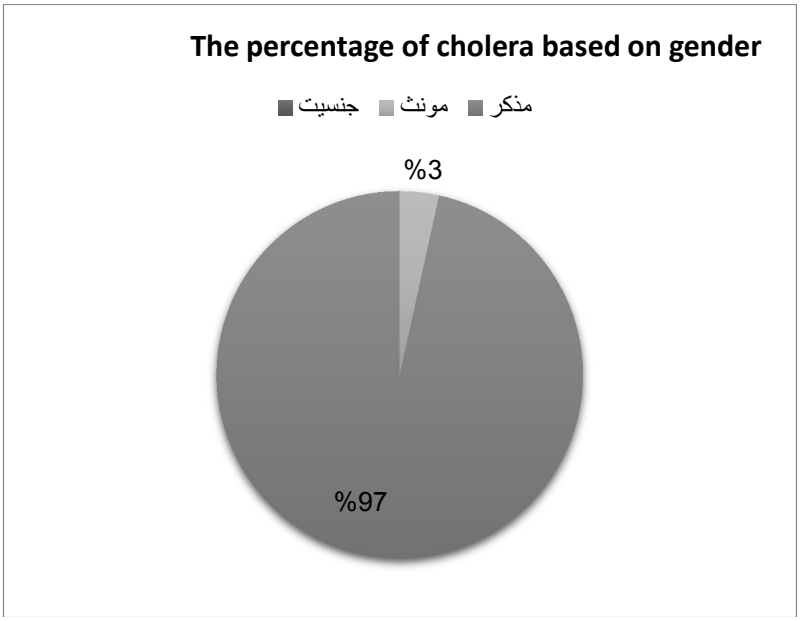

Figure 2. Cholera cases on the basis of gender in Sistan-Baluchistan province in 1392

Table 1 frequency of patients with cholera in the province of Sistan and Baluchestan in 1392

Type Biotypes	Afghan		Iranian		Women with		Men with		All people	Year
Inaba	96%	72	4%	2	3%	2	97%	73	75	1392

4. Discussion and conclusion

Although resources are abundant, but the most common route of infection with the bacteria that causes cholera humans are infected or healthy carrier. Other important measures to prevent the transmission of cholera by water, protect water resources from pollution, particularly domestic sewage and urban. Through the improvement of health protection and be done with these resources. Improvement sources such as wells, canals, fountains and water tanks is Zrrvry.

The major cause of ill persons failing to comply with the hygiene, the use of drinking water is unsanitary.

References

1. Seas C, Gotuzzo E. Vibrio Cholera. In: P-rinciples and Practice of Infection Diseases, Mandell G, Douglsas S, BennettE.6thed. Churchill: Livingstone; 2005. P.2536-44.
2. James C. The agenda of communicabledisease control in humans.1thed. Pou-rsina: Tehran; 2001.
3. Center fordisease control andmanagement. [National Disease Control guid-elines]. Published by the Ministry of Healthand Medical Education; 1999. (Persian)
4. Hashemi A, Zolfaghari F, Zonnour E. Epidemiological study of cholera in Sistanand Baluchestan Province in 1999. J Med 2011;45:134-9.
5. Holakouie N, Younesian M, Nouraie M. The using of case - control study to investigate the determinants of cholera outbreak in 1998 in Tehran. J Med 2001;31:144-8.
6. Rodrigues A, Sandstrom A, Tome C. Protection from cholera by adding lime juice to food- results from community and laboratory studies in Guinea-Bissau, West Africa. Trop Med Int Health 2000;5:418-22.
7. http://behdashtmohit0511.blogfa.com/page/vaba.aspx.
8. http://www.pezeshk.us/?p=7420.

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