

Waterborne Epidemic?

By

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Imagine if you will, living in an area that the average man has less than a 50% chance of living past the age of 30. You are unable to move away or choose to do anything that will prolong your life. Also, know that your sons will most likely suffer the same fate as your father, brothers, and most other males in your family. Now consider that no one knows what is causing your kidneys to fail. They just know that once you are diagnosed with the disease, you have been given a slow death sentence.

La Isla, Nicaragua is such a place. The community with approximately 400 homes is referred to as the “City of Widows.” It is in the agriculture region in Northwestern Nicaragua. The nearest large town is Chichigalpa with approximately 60,000 people. It is an area known for growing sugar cane, since the cotton industry went bust in the late 1980s.



The disease is known as Chronic Renal Insufficiency (CRI). The local means of testing is through a blood sample and checking the level of creatinine. Creatinine is the level of toxins in your blood through which kidney function is determined. Unfortunately, this test does not discover the kidney disease until you have reached stage 3. At this point you can no longer work and even simple activities have become increasingly exhausting. You lose your job and with it goes the only income available for your family, roughly \$800/year.

The cause of this disease is still unknown. Several theories have been tested, but there has not been the “smoking gun.” Theories such as heavy metals contamination, pesticides and herbicides being applied to the sugar cane, chronic dehydration due to the strenuous work of working in the fields, and even the urine from cane rats entering through sores while performing work have been looked into. The kidneys themselves have given no clue to the disease through autopsies. The disease affects others and not just sugar cane workers. Some children younger than age ten have also been diagnosed with the disease. The one thing that has been determined is that the disease is deadly. Exact numbers of those that died from the disease is also unknown as many cannot afford medical attention. Some estimates have gone as high as 24,000 have died in this region since 2000.

The most comprehensive study in the La Isla area was conducted by Boston University. This study was completed just last year and did not do an extensive study of the seasonal changes in the water used for drinking. It also was unable to locate the cause of the disease. However, it did discover that high percentages of women were also affected by the disease through a more complete kidney function test. This test showed that predominately women had stages 1 and 2 kidney disease. More importantly, it showed what could be eliminated as a cause.

I too am trying to figure out what has caused the disease. The theory that I am pursuing deals with a specific pesticide in the water. I am looking into the pesticide Toxaphene. Toxaphene is of special interest as it is mentioned in two other studies in the general area. It is also considered a very persistent chemical that has a half-life of 14 years. It was used extensively in the cotton industry, and combined with other chemicals such as DDT for many years. Because it is insoluble, it is transported either as a vapor or attached to the soil. I am considering the latter. The EPA states that in excess of 3ppb, toxaphene can cause kidney and liver issues. There are also believed to be higher than normal liver disease in the area although no studies were found to substantiate the claims. Some shallow dug wells experienced seasonal toxaphene levels in excess of 80ppb in the area just north of La Isla according to a study by Josh Moncrieff conducted in 2005. Another study conducted in 2003 showed high levels of toxaphene in the estuaries downstream of the affected area.



I personally have been working on solving this mystery for three years. My theory is that toxaphene is being transported to the wells during the rainy season with sediment. The water table changes dramatically between dry season and the wet season, typically 25 feet. The worst hit areas have two things in common. First is shallow hand dug wells which have no well seal. Second is they are located near streams or dry stream beds. In the many interviews I have conducted, the locals say the disease exploded around the year 2000. A giant mud flow called a lamar occurred in late 1998 which filled most wells with sediment. These wells were cleared of the mud and put back in use. The health department also stated there were only isolated cases prior to the lamar.

I have a deep feeling of compassion for the people in La Isla and the surrounding area. As I build relationships with the people there, I realize what an isolated comfortable existence I am living. What I experience here in the United States is not the normal world. I am crazy blessed when it comes to lifestyle, health, and many other areas. I have no reason to complain about anything. I have hope that this mystery will be solved and do not care by whom.

I am scheduling my fourth trip to the region for June or July this year. I am willing to bring a team of 3 or 4 individuals that want to try to make a difference and solve this mystery. It is best to reach me by email

at vanvfam@yahoo.com if interested. This trip will not be for the faint of heart and I strongly encourage doing some research about the disease and the area before responding. Thank you for your time.