

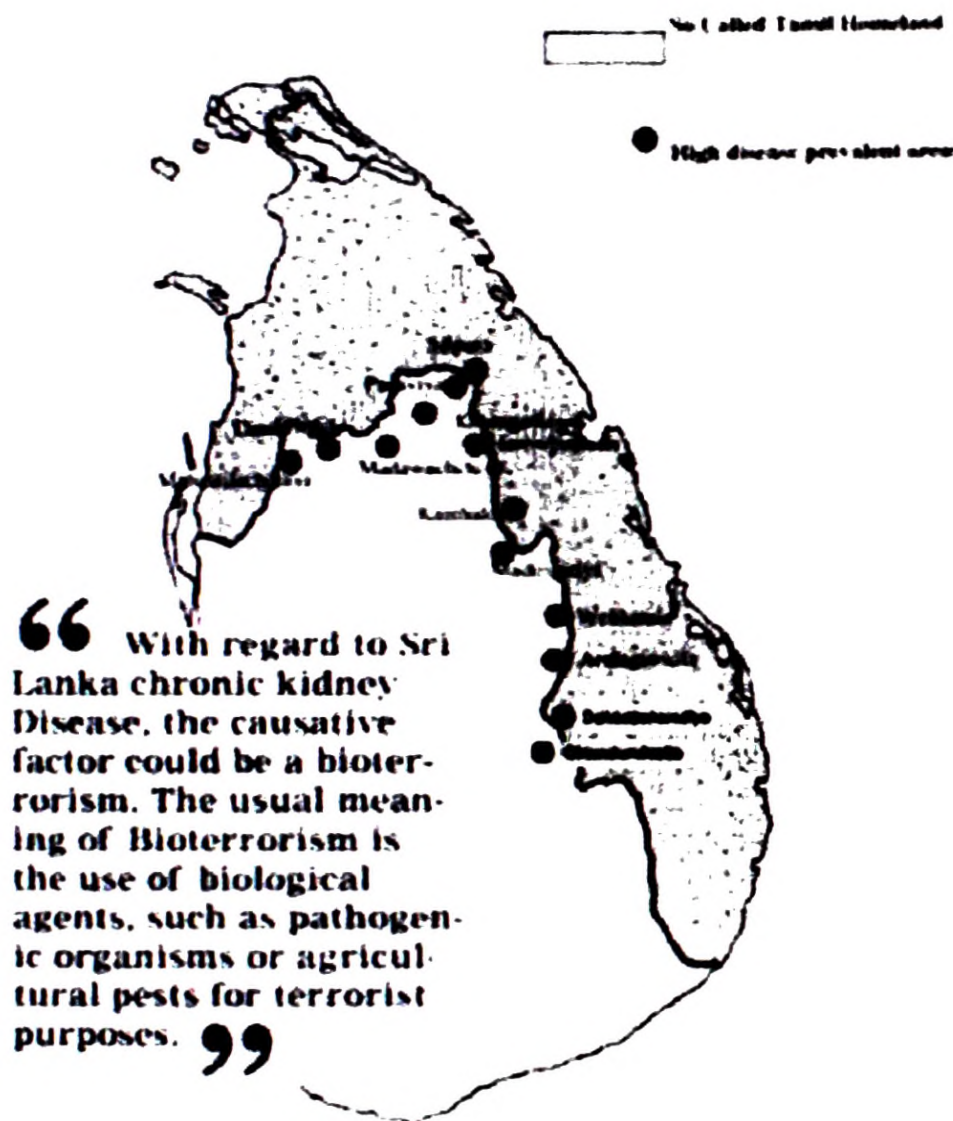
3.6 IS BIO-TERRORISM THE CAUSE OF RAJARATA KIDNEY DISEASE?

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Is bio-terrorism the cause of Rajarata kidney Disease?

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Chronic kidney disease (CKD) is a growing worldwide health problem. The aetiology varies between countries but Diabetes and Hypertension are usually dominant factors in other parts of the world.

In recent years we have noticed a very worrying abnormal increase in the number of patients with chronic kidney Disease in certain parts of North central, Eastern and Uva Provinces in Sri Lanka. Some authors name this disease as the Rajarata Kidney Disease.

Interestingly, we can observe higher number of CKD patients from the villages located adjacent to so called Eelam ,Madawachchiya, Padaviya,Sripura, Madirigiriya, Girandurukotte (see map 01).

Unfortunately, still no national Chronic Kidney Disease database is available in Sri Lanka. But according to health sector statistics more than 6,000 cases have been reported for the last 5 years. Most of them are from above mentioned areas which we can dub 'CKD Belt'.

The disease onset is in adolescence and number of cases Reported increases with increasing age. These patients typically present with non specific signs and symptoms, lethargy, weakness, moderate anemia and mild hypertension. Western medical studies conducted so far suggest that a common although yet unknown aetiology, leading to marked Tubulointerstitial fibrosis of the kidney that finally causes Irreversible kidney failure. Renal Biopsies showed Tubulointerstitial disease in more than 80% of the cases.

Even though several studies have been conducted the aetiology still remain largely unknown. Following are some of the current theories put forward.

01. Excessive quantities of naturally found fluoride in the ground water which can harm the kidney.

02. Excessive use of fertilizers, Insecticides, and weedicides.

03. The use of aluminum utensils made out of low quality cheap Aluminum to store water and to prepare food. The fluoride content found in the groundwater reacts with the Aluminum creating Toxic compounds (ALF x)

04. Entry of Toxic element such as Cadmium via food chain

05. Excessive consumption of poor quality illegal liquor.

When we consider the geographical distribution of the outbreak, any of the above theories are unable to give a consistent explanation for the existing problem. According to Prof. C. B. Dissanayaka (1991) high amount of fluoride in the groundwater can be seen in all parts of the Dry zone while chronic kidney disease is highly prevalent only in 'CKD Belt'

Excessive use of fertilizers, Aluminum utensils and poor quality illegal liquor are not limited to certain parts of the country, those are countrywide problems.

This disease shows some similarity with previously observed Balkan Endemic Nephropathy (BEN) which is also an irreversible kidney disease of unknown origin. BEN geographically confined to several rural regions of Bosnia, Croatia, Serbia and Bulgaria where disease occurs only in rural areas located in alluvial valleys of tributaries of the Lower Danube River.

It is estimated that several thousand people in the affected countries are currently suffering from chronic kidney disease much similar to the condition in Sri Lanka. What we have to remember is this Balkan area is also subject to experiencing separatism.

With regard to Sri Lanka chronic kidney Disease, the causative factor could be a bioterrorism. The usual meaning of Bioterrorism is the use of biological agents, such as pathogenic organisms or agricultural pests for terrorist purposes.

High prevalence of disease can be seen in the villages located adjacent to the so-called Eelam. For the last 23 decades these villages were repeatedly attacked by LTTE terrorists and hundreds of unarmed innocent farmers brutally killed. Even after these killing sprees, the terrorists were not able to achieve their target of driving the villagers away. It may be that they have changed their strategy

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Comments

- According to a research done by the dept of Chemistry, University of Colombo, Analytical division, (mainly Prof H. D. Gunawardena), the nitrate level in water in those areas are several folds higher than the normal acceptable level, so does the carbonate level. However, carbonates can be removed by several methods, but unfortunately, the nitrate level can not be brought down by any means,....

When I was in Sri Lanka last June, we had a discussion about that problem, but it is inconclusive if the nitrate levels cause the kidney problems,... However, there is no known inexpensive method to eliminate the excess nitrate in well water ... According to him also the culprit is the nitrate and phosphate fertilizers, and the high fluoride levels are also noted.... But he didn't study about the physiological damages as he is an Analytical Chemistry Professor. I don't think it has anything to do with terrorism

- According to him there is a co-relation between this disease and LTTE. But he does not give any scientifically proven evidence. That is only his imagination. Not that I want to white wash LTTE, they have done so many things much worse than this, but thinking they are smart to plan something like this is just stupid.

I have personally checked the details and have found his claims that there is nothing called 'CKD belt' and in some of the points he has recorded the disease to be highest, has not even recorded a single patient. These people who claim them selves to be doctors should be ashamed of spreading these unscientific myths.

- Snake bites also can cause kidney problems. We have to find out the number of snake bites a year in Rajarata to affirm that.