



“Endemic Fluorosis” in British India and how it was addressed by Independent India

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This is a story of a dreadful, untreatable disease born in 1937 in Nellore district then in Madras Presidency. The disease detected by farmers in cattle, used for ploughing the land, were unable to get up and walk nor plough the land. The farmers traded the cattle in the weekly market and exchanged for a new pair. The fate of the new pair was the same in 4 - 6 months. It was then noticed some of the villagers had the same problem with stiff back, rigid and painful joints, and were unable to squat.

The British Doctors and some Indian Doctors, investigated the water and rock samples and found high Fluoride in rocks and water. Fluoride was identified the cause of the problem. It was also considered necessary to investigate some of the ailing patients in the hospital. Clinical, radiological and biochemical investigations led to a better understanding of the disease. Two reports appeared in 1937, one in the Indian Medical Gazette and the other in the Indian Journal of Medical Research. The disease was titled “Endemic Fluorosis”.

Independent India, based on the scanty information then available went ahead by investigating animal models and human subjects in greater detail. The limited resources available in India was fully utilized and grants-in-aid made by the International Development Research Centre (IDRC), Canada for “:Fluorosis India” led to substantial developments in addressing the public health problem.

India developed a method to diagnose Fluorosis from other disorders, particularly from

- Arthritis (Painful, swollen joints)
- Osteoporosis (Bone atrophy)

- Osteomalacia (Vitamin D and Calcium deficiency) and became useful for treating patients as early diagnosis was possible. The crippling stages of Fluorosis gradually disappeared.

Indian Scientists identified many diseases are linked to the poisonous effects of fluoride in water, food, beverages, habit forming substances (churans), spices, which were added with rock salt for its tangy taste, aroma containing high fluoride; almost 157 times more than what the body can tolerate. This became a serious issue and addressed through public awareness programmes.

The Fluorosis Linked diseases are :

1. Anaemia with low haemoglobin (led to maternal & infant mortality)
2. Irritable Bowel Syndrome (IBS),
3. Extreme Muscle Weakness and Fatigue
4. Frequent tendency to Urinate though not Diabetic.
5. Hypertension,
6. Renal failure,

Each of the linked disorders have been successfully addressed. Patients are availing the benefits now.

The Government of India introduced two programmes. One dealing with “Safe Drinking Water”, where the State Water Supply Engineers were trained & updated on Fluoride in drinking and cooking water, the modalities to follow. The second programme is on Prevention and Control of Fluorosis (NPPCF), which the Government is supporting through Five Year Plan periods. Both water and health are National Programmes.

“Endemic Fluorosis in India” has been addressed successfully and the nation has become a “Global Consultation Centre” for the disease. India has added a wealth of information on the disease during the post-independent era benefitted the common man enormously.

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