

WORLD NEPHROLOGY CONGRESS

June 20-22, 2018 | Paris, France

Fluoride and kidney- A study from tribal areas of Chhattisgarh, India

Punit G, Nikita J, Swati S, Gurvinder C and Ayushi M
PT.J.N.M. Medical College, India

Objective: To evaluate the renal profile and fluorosis associated abnormalities in patients living at endemic fluoridated tribal areas of Chhattisgarh.

Material And Methods: The cross sectional study was conducted at village Supebeda block Devbhog District gariyabandh C.G. India. An ethical clearance was obtained from the concerned authorities. 70 families were screened and 280 Subjects who had renal failure/ Anemia/ Dental/skeletal fluorosis were included in the study. The aim and objective were explained to the studied subjects of the village and biochemical, Hematological and radiological assessment was done. The main source of drinking water in this area was hand pump.

Result:

- In the present study, out of total 280 subjects, 94 were found to have renal injury.
- Out of 94 patients of renal injury, 53.19% were male, 46.8% were female.
- In Kidney injury patients, 6.38% were between 6-12 yrs age, 17.02 % were between 13-20 yrs, 67.02% were between 20-60yrs and 9.57% were in geriatric age
- Hematological study of these patients reveals that 42.55% were anemic.
- In Kidney injury patients, Dental mottling was present in 38.29%.
- Urine fluoride of these patients reveals that 28.72 % with increased urine fluoride
- Evidence of skeletal fluorosis is present in 71.27% subjects of renal injury in C.T.Scan L.S. Spine.
- 36.17% of renal injury patients are having both skeletal fluorosis and dental mottling.
- 29.7 % of renal injury patients are having both dental mottling and anemia.
- 22.3% of renal injury patients are having both skeletal fluorosis and anemia.
- 35.1% presented with renal parenchymal disease grade II in ultrasonography.

Conclusion:

- Males were mainly affected as compared to females.
- Maximum patients were between 20-60 yrs age group.
- Maximum were affected with renal injury & dental mottling
- 30% of renal injury patients are having both dental mottling and anemia.
- Skeletal fluorosis was presented more as compared to dental fluorosis in renal injury patients.
- Young children also suffered from renal injury with dental mottling due to fluorosis.
- Maximally combination of skeletal fluorosis and dental mottling is present in Renal injury patients.

Result: In the present study, a total of 280 subjects were examined including 138 males (49.28%) and 142 females (50.71%).all the results obtained after various investigations were recorded and data was analyzed by using the SPSS. The subject examined in present study is having a variety of fluorosis associated abnormalities including renal failure, dental mottling, and skeletal abnormalities. 20% of the subjects belong to age group 6-12 yrs, 24.6% were between 13-20 yrs, 27.14 % were between 20-60 yrs and 28.12% belongs to geriatric age group. Hematological study reveals that 33.57% population were in renal failure(increased serum creatinine), 41.07% were anemic. Dental mottling was present in 38.2 %. 24 hr urine fluoride reveals that 29.28% of the studied subjects were with increased urine fluoride. 35.35% presented with renal parenchymal disease grade II in ultrasonography. Evidence of skeletal fluorosis is present in 71.07% subjects in C.T. Scan L.S. Spine. Present study shows that out of all 280 subject examined, 94 subjects were in renal failure, in which 53.19% were male, 46.8% were female , 42.55% were anemic, 38.29% with mottling , 28.72 with increased urine fluoride and 71.27 % with skeletal fluorosis.

Biography

Punit Gupta is MBBS, MD (Medicine), DM (Nephrology) and PhD. He is the Honorary Nephrologists to the Governor of Chhattisgarh State since 2009. He is Chairman and Members of many important academic and management committees of various Government Medical Institutions in the country and the Pt. Deen Dayal Upadhyay Health Sciences University, Raipur. He has guided over 100 Postgraduate & Technologist student for their thesis & Project in Nephrology & Research and also served as an examiner for the university examinations. A man of researches and publication, he has presented more than 160 research papers and abstracts on kidney diseases in tribal populations at renowned national and international conferences. He has developed and economic, efficient and effective walkie talkie system for consultation and directions to the hospital staff and doctors. He has been awarded Dr. B. C. Roy National Award for his research to give aid or assistance to research project for the year 2016

punit282004@yahoo.co.in

Notes: