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Correlating Silica Content in Drinking Water with Kidney Failure in Telangana-A Basic Study

A. Dayanand*, A. Vasantha and Viplav Duth Shukla

Department of Chemistry, Govt. City College, Hyderabad, **INDIA**
Email: nandachemjl@gmail.com

ABSTRACT

Arogyasri data reveals that since 2007 nearly 19000 registered for kidney failure out of which 7000 are living as on today. As it is well known fact that most of the physical ailments are because of the drinking water. It is pertinent to correlate the presence of silica; one of the responsible factors for kidney failure, in drinking water. The solid crust of the earth contains 80% to 90% silicates or other compounds of silicon. Water passing through or over the earth dissolves silica from sands, rocks and minerals as one of the impurities it collects. The silica content in natural waters is commonly in the 5 to 25 mg L⁻¹ range, although concentrations over 100mg L⁻¹ occur in some areas. Water is filtered by kidneys in which nephron is the functional unit. pH of water should be 6.5 to 8.5 (the permissible limits of pH according to BIS standards). Renal failure is mainly because of the pressure created in the glomerulus. There are different areas where kidney problems are prevalent. The aim of this project is to select drinking water from the epidemic areas of kidney failure and correlate with the silica content in it. Thorough review of literature is done to get assistance from earlier findings. This project is objected to prove that silica present in drinking water is also one of the reasons for kidney failure of the people in those areas.

Keywords: Drinking water, Silica, Glomerulonephritis.
