

Health aspects of Urmia County drinking water quality

Mohammad Mosafari: Tabriz Health Services Management Research Center, Health Faculty, Tabriz University of Medical Sciences, Tabriz, Iran

Aida Ejlali: Center of Student Researches, Tabriz University of Medical Sciences, Tabriz, Iran

Jalil Nazari: Tabriz Health Services Management Research Center, Health Faculty, Tabriz University of Medical Sciences, Tabriz, Iran

Abstract

Background and Objectives: Quality of drinking water has considerable effects on citizen's health and its comparison with available standards and knowledge about permissible limits can provide useful information in order to community health. In present paper, condition of quality of drinking water of Urmia County has been assessed and analyzed.

Material and Methods: Analysis results of drinking water of Urmia city and its villages comprising 182 available analysis during 2012 and 2013 was collected from Province Health Center and statistically analyzed for general parameters using SPSS and compared with national standard.

Results: Hardness of drinking water in Urmia County varied from 100 to 1040 mg/L as calcium carbonate with an average of 309 ± 144 mg/L, which indicates soft to very hard water. Dissolved solids was 103 to 1900 mg/L with an average of 366 ± 287 mg/L. In the case of fluoride which is important respect to health, concentration range varied from zero to 1.5 mg/L with an average of 0.21 ± 0.23 mg/L. Turbidity was less than 0.5 NTU in 44% of analyzed samples, between 0.5 to 1 NTU in 34% and higher than 1 NTU in 22% of samples, respectively.

Conclusion: In comparison with national and international standards for drinking water quality, in some parts of Urmia County, value for some quality parameters was not in accordance with permissible level which requires corrective action. However, in general physicochemical quality of studied waters was suitable for drinking purposes.

Keywords: Drinking Water, Quality, Hardness, Fluoride, Urmia

*Corresponding author:

E-mail: aidaejlali@yahoo.com