Dental Caries & Dental Fluorosis status in areas with different concentrations of fluoride in drinking water among 6 &15 years old school children

-A Descriptive study

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Abstract :

The present study was conducted in suboptimum, optimum and more than optimum naturally occuring fluoride areas, to assess dental caries and dental fluorosis status among school children of ages 6 and 15 years in Dharwad district, Karnataka state, India.

Clinical examination of 1110 subjects was carried out after the estimation of fluoride concentration in their drinking water from the collected water sample.

The study results show the prevalence of dental caries in deciduous dentition ranging from 55.2% with 2.2 mean dft at 0.2ppm, to 13.3% with 0.34 mean dft at 5ppm, in drinking water.

Dental fluorosis in deciduous dentition ranges from 2.9% at 0.2ppm to 16.1%at 5ppm.

In permanent dentition the prevalence of dental caries ranges from 48.1% with 1.27 mean DMFT at 0.2ppm to 35.3 % with 1.13 mean DMFT at 5ppm in drinking water.

The prevalence of dental fluorosis in permanent dentition ranges from 6.96 % at 0.2ppm to 93.8% at 5ppm.

From the study results, it is concluded that in deciduous dentition the prevalence of dental caries and caries experience gradually reduced, but the dental fluorosis gradually increases, as the fluoride concentration increased in drinking water.

In case of permanent dentition, there is not much change in the prevalence of dental caries, but an appreciable increase in the prevalence of dental fluorosis was noticed with increased fluoride concentration in drinking water.

The prevalence of dental fluorosis gradually increased from 6.96% to 93.8% as the fluoride concentration increased from 0.2 to 5.0ppm in drinking water.