

Goitre and Thyroid disorder prevalence in healthy schoolchildren of Kashmir Valley

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Background: There has been a gradual transition among pattern and prevalence of thyroid dysfunction in pediatric population in post iodisation era. Kashmir valley, once considered to be endemic zone for iodine deficiency disorders has shown marked improvement in overall iodine nutrition in recent surveys. **Objective:** To study prevalence of goitre and thyroid dysfunction among healthy school children of Kashmir valley. **Methods:** A multi-staged, cross sectional survey covering 666 schoolchildren, aged 6–18 years was conducted. Goitre examination by palpation method was graded as per WHO/UNICEF/ICCIDD classification. Thyroid function tests (TFT) were measured by DXI 800, Beckman Coulter Chemiluminescence Random access analyzer and urinary iodine excretion (UIE) was measured by ammonium persulfate digestion method, based on Sandell–Kolthoff reaction and was estimated in 35 subsampled children. **Results:** Thyroid dysfunction (goitre and/or thyroid function abnormalities) were seen in 7.8% (95% CI: 5.9–10.1%) of the children; 9.3% (95% CI 2.9–8.9%) girls and 5.3% (95% CI 6.7–12.4%) boys. The overall prevalence of goitre in the present study was 2.4% with significant difference observed between girls and boys (2.4% vs 0.00%; $p < 0.00$). Abnormal TFT was found in 6.7% children including 4.26% with subclinical hypothyroidism, 1.6% with overt hypothyroidism and 0.7% with overt thyrotoxicosis. UIE ranged from 71.68 to 558 ug/gm of creatinine (median 150). **Conclusions:** Overall there has been gradual improvement in iodine nutrition in Kashmir Valley as prevalence of goitre has reduced from 3.8% as reported in 2013 survey from our centre to 2.6% in present survey. Subclinical hypothyroidism emerged as most common thyroid abnormality which need to be managed judiciously to avoid long term unwanted therapeutic burden on apparently healthy paediatric population.

Key words: Goitre, thyroid disorders and school children.