What is New in Pediatric Thyroid Disease?

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Abstract
In recent years significant advances have been achieved in developmental research and clinical practice of pediatric thyroidology. The breakthrough was the first description of a patient with thyroid hormone receptor alpha gene mutation. Subsequently >10 children with the same condition were reported. Thyroxine therapy normalized the biochemical abnormalities; but had no impact on the symptoms.

Two clinical practice guidelines were published in the last two years. In 2015, the ATA acknowledged that children are not just small adults by publishing the first guideline on thyroid nodules in children < 18 yrs. The comprehensive document included an extended section on thyroid papillary carcinoma, which is the commonest cause of thyroid nodule in this age group. The second guideline was from the ESPE on the screening, diagnosis and management of congenital hypothyroidism (CH). According to the ESPE working group, all newborns with CH should be assessed for congenital cardiac defects, dysmorphic features and hearing loss and that teaches should not be informed about children with CH to avoid stigmatization. However, the lower screening TSH cut-point for borderline repeat testing is still unresolved.

The controversy in the management of childhood Graves’ disease continues. In the post PTU era there has seen a shift toward using radioactive iodine children; however, a national follow-up study showed that prolonged medical treatment for up to 10 years was significantly associated with a lower incidence of relapse. Clearly, more data are required before clinicians can adapt such practice.

A recent nature review on subclinical hypothyroidism concluded that unlike adults, there is no evidence of cardiometabolic risk in children to justify the treatment of asymptomatic child with normal fT4 and TSH < 10.