Serological marker of dermatitis herpetiformis in hypothyroidism due to Hashimoto's thyroiditis

Sir,

Dermatitis herpetiformis (DH) is a rare skin disease that is associated with a variety of autoimmune diseases including Hashimoto's thyroiditis (HT). The prevalence of HT varies from 5% to 20% in different studies among patients with DH.[1] However, there are no data in the literature regarding the occurrence of DH among hypothyroid subjects due to HT. As skin disorders are common in hypothyroid subjects, it is important to know the prevalence of DH among them. Hence, this hospital based pilot study was done to look for the presence of a serological marker of DH in patients with hypothyroidism due to HT in a tertiary care institute in India.

The study was conducted in a Tertiary Care Centre over 18 months after getting approval from the Ethical

Committee of the Institute. Hypothyroidism was defined as high serum thyroid stimulating hormone (>5.5 mIU/l) with or without low serum thyroxine level. HT was defined as patients having high thyroid peroxidase antibody titre and/or positive thyroid fine needle aspiration cytology. All subjects gave their informed consent before participating in this study in accordance with the declaration of Helsinki. One hundred and forty-two hypothyroidism subjects due to HT were evaluated for the presence of IgA antibody against epidermal transglutaminase (anti-eTG Ab) by enzyme immunoassay (EIA) using kits from Euro Diagnostica AB, Malmo, Sweden. The detection limit of this assay kit was 0.5 U/ml and anti-eTG Ab titre >3.5 U/ml was considered as positive. Both their intra-assay and inter-assay coefficient of variation were <5%.

There was female preponderance in this study with a male:female ratio of 8:134. The median age was 32.5 years with a range from 18 to 65 years. The median duration of hypothyroidism was 1-year. Anti-eTG Ab was present in 7 (5%) of HT patients. But none had clinical features suggestive of DH.

DH is the skin manifestation of celiac disease (CD). Direct immunofluorescence (IF), demonstrating IgA granular deposits localized either in the dermal papillae or along the basement membrane in the perilesional skin, is the gold standard for diagnosis of DH.[2] However, this cannot be used as a routine procedure. As eTG is considered as the autoantigen of DH, an antibody against it in serum can be used as a screening test. The sensitivity of anti-eTG Ab for the diagnosis of DH is 52–100% and depends on the method being used to detect it.[2-5] The detection of anti-eTG Ab by EIA had a sensitivity of 95% in contrast to 63.5% by indirect IF method.[3,4] The positive serology of DH may antedate its signs/symptoms like any other autoimmune disease, and anti-eTG Ab is very specific for DH with positive predictive value of 100%.[5] Hence, our patients with positive antibody need long-term follow-up with a dermatologist. We also plan to review them periodically along the timeline for the clinical significance of their positive serology.

There were few limitations in this study. Skin biopsy was not performed in any of our patients with positive anti-eTG Ab. In addition, serology for CD and serum total IgA level was not done among them. However, nobody had clinical features suggestive of CD. However, the strength of our study is that it is the first of this kind in the literature.

To conclude, 5% of hypothyroid subjects due to HT can have positive anti-eTG Ab, whose clinical significance is not known at present.

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Conflicts of interest
There are no conflicts of interest.

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