Autoimmune polyglandular syndrome type II: Schimidt's syndrome, a unifying diagnosis in a case presenting with an uncommon combination of multiple endocrine disorders

Sir,

Autoimmune polyendocrinopathies or autoimmune polyglandular syndromes (AIPGS) are disorders in which two or more endocrine glands are simultaneously or sequentially involved, as a consequence of autoimmune T cell dysfunction associated with autoimmune involvement of some nonendocrine organs.[1] Presentation of two or more endocrinal gland involvement should alert the clinician to evaluate for a unifying diagnosis. We present here, a challenging case that was evaluated and managed at our center.

A 38-year-old male presented with 10 kg weight loss over 5 months with increased appetite, fatigability, heat intolerance, hyperdefecation, and increased sweating. He had a body mass index of 17.11 kg/m^2, resting tachycardia, sweaty palms, thyromegaly, and brisk deep tendon jerks. Family history was noncontributory. Investigations are depicted in Table 1 under the heading "first evaluation." He was started on oral neomercazole and beta blockers for Graves' disease. He improved, but after 6 months he

Table 1: Investigations

Test	Result
First evaluation	
Hb	14.3 g/dL
Total leukocyte count	8600/cumm
Differential leukocyte count	Polymorphs 69%, lymphocytes 26%, eosinophils 4%, and monocytes 1%
TSH	0.01 uIU/mL (0.5-6.5)
T3	2.04 ng/mL (0.6-2.1)
T4	15.26 μg/dL (5.5-13.50)
Anti TPO antibodies	1273 IU/mL (normal: <20 IU/mL)
USG thyroid	Diffuse and symmetrical enlargement
Chest radiograph and USG abdomen	Normal
99mTechnitium scan	Uniform increased uptake
Second stage evaluation	
Serum potassium	5.8 meq/L
Serum sodium	132 meq/L
Basal cortisol (postaddisonian crisis stabilization)	2.5 μg/dL (normal 12-25 μg/dL)
Serum cortisol post-ACTH stimulation	4.04 ug/dL (range >18 ug/dL)
HIV	Nonreactor
A chest X-ray, contrast CT abdomen (for adrenals, and any evidence of granulomatous diseases or lymphomas)	Normal
Third stage evaluation	
IgA tissue transglutaminase antibody	96.33 units (normal <20 units)
A duodenal biopsy (four biopsies at different sites)	Confirmed the diagnosis of celiac disease

CT: Computed tomography, USG: Ultrasound, TPO: Thyroid peroxidase antibodies, T4: Thyroxine, T3: Triiodothyronine, TSH: Thyroid-stimulating hormone, Hb: Hemoglobin

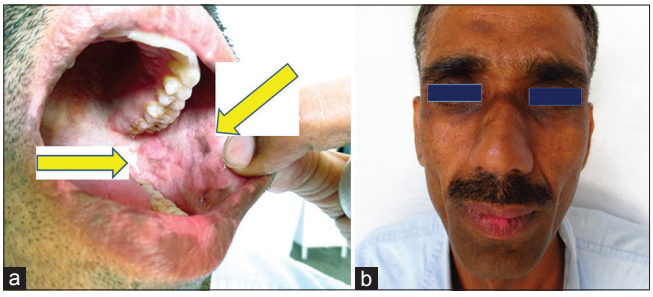

Figure 1: (a) Hyperpigmentation in oral mucosa. (b) Hyperpigmentation around the eyes, bridge of nose and early vitiligo over lips

came again with extreme weakness, episodic central pain abdomen, vomitings, and further weight loss. He had significant postural hypotension and hyperpigmentation as shown in Figure 1. Investigations at this stage are shown in Table 1 under heading "second stage evaluation." A clinical suspicion of Addison's disease was raised and his symptoms promptly responded to steroids and fluid resuscitation. He denied any other symptoms. Assessment for other autoimmune diseases was sought was for. Immunoglobulin A tissue transglutaminase antibody was requested, but meanwhile, the patient requested leave due to domestic reasons. He was discharged on low dose hydrocortisone, fludrocortisone, and neomercazole. He came back after 4 months with hypopigmented patches over the dorsum of both hands and had a recurrence of hyperdefecation along with a weight loss of 03 kg. Dermatologist consultation was sought and was diagnosed to have vitiligo. Investigations at this stage are shown in Table 1 under heading "third stage evaluation." In view of the association of Graves' disease, Addison's crisis, vitiligo and celiac disease, a diagnosis polyglandular autoimmune syndrome type II, or "Schmidt's syndrome" was made. He was subjected to a radioiodine ablation of the thyroid gland with replacement thyroid hormone. The patient has gained weight on a gluten free diet with a good performance status.

Two major types of AIPGS have been described. Type I also called autoimmune polyendocrinopathy candidiasis ectodermal dystrophy syndrome ()APECED) is a rare autosomal recessive disorder. Hypoparathyroidism or chronic mucocutaneous candidiasis is usually the first manifestation.

Type II or "Schmidt's syndrome" (much common variety) has primary adrenal insufficiency as its principal manifestation.[2] Hypo or hyperthyroidism, type 1 diabetes mellitus, and gonadal failure (more common in females) are the other endocrinal manifestations. Nonendocrinal involvement includes myasthenia gravis, vitiligo, pernicious anemia, alopecia, and uncommonly celiac disease.[3] About 50% cases are familial with several modes of inheritance described.[4,5] Women are 3 times more commonly affected than men, most cases occurring in the third to fourth decade of life.

Our patient was a male with celiac disease in addition to other features described above which makes an uncommon combination. Autoimmune diseases should be seen linked to each other as many have some common underlying pathology. A high index of suspicion for another endocrine disease should be present when dealing with one. A family history of endocrinal disease is also very helpful in the evaluation of such cases.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/ their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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Conflicts of interest

There are no conflicts of interest.

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References

1. Bain A, Stewart M, Mwamure P, Nirmalaraj K. Addison's disease in a patient with hypothyroidism: Autoimmune Polyglandular Syndrome type 2. BMJ Case Rep 2015;2015. pii: bcr2015210506.
2. Lakhotia M, Pahadia HR, Kumar H, Singh J, Tak S. A case of Autoimmune Polyglandular Syndrome (APS) type II with hypothyroidism, hypoadrenalism, and celiac disease – A rare combination. J Clin Diagn Res 2015;9:OD01-3.
3. Tsai SL, Green J, Metherell LA, Curtis F, Fernandez B, Healey A, *et al.* Primary adrenocortical insufficiency case series: Genetic etiologies more common than expected. Horm Res Paediatr 2016;85:35-42.
4. Khattak AL, Ali W, Saleem S, Idris M, Khan NA, Pasha W. Schmidt's syndrome in a 32 years old female. J Ayub Med Coll Abbottabad 2015;27:467-9. Erratum in: J Ayub Med Coll Abbottabad 2015;27:743.
5. Dave P, Bhosle D, Dharme M, Deshmukh D, Patel J. Autoimmune Polyglandular Syndrome type 2 with alopecia universalis and hypoparathyroidism. J Assoc Physicians India 2015;63:74-6.

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