

# Lupus erythematosus, thyroiditis, alopecia areata and vitiligo - A multiple autoimmune syndrome type 3 case presentation

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## ABSTRACT

The combination of at least three autoimmune diseases in the same patient has defined as multiple autoimmune syndrome (MAS). Abnormalities of T cell-mediated immunity and humoral immunity have been described previously in the literature. Aims of work were to investigate the 22 years old patient with lupus erythematosus for three years and autoimmune thyroiditis for one year, regarding other possible autoimmune conditions and to establish a treatment to control the diseases. The clinical exam revealed some circular hairless patches on the beard appeared about three months ago and white depigmented disseminated areas started one month ago and the laboratory investigations were performed. The modified laboratory findings were: total IgE 530 UI/mL, Anti-SSA (anti-RO) antibodies > 200 IU/mL, SSB negative, Antinuclear antibodies (ANA) positive and fine speckled, Lupus anticoagulant testing positive, Anti-thyroid peroxidase antibodies 951 UI/ml, TSH 4,7  $\mu$ UI/mL. The diagnosis of multiple autoimmune syndrome (MAS) type 3 including Lupus erythematosus, autoimmune Thyroiditis, Alopecia Areata and Vitiligo was established. Endocrine autoimmunities are associated with autoantibodies that react to specific antigens, whereas patients with collagen diseases synthesize immunoglobulins that recognize nonorgan-specific cellular targets, such as nucleoproteins and nucleic acids. Cellular autoimmunity is important in the pathogenesis MAS. The existence of one autoimmune disorder helps lead to the discovery of other autoimmune conditions.

**Key words:** Lupus erythematosus; Autoimmune thyroiditis; Alopecia areata; Vitiligo; Multiple autoimmune syndrome type 3

## INTRODUCTION

The combination of at least three autoimmune diseases in the same patient has defined as multiple autoimmune syndrome (MAS). Abnormalities of T cell-mediated immunity and humoral immunity have been described previously and the literature reports overlap syndromes in various combinations; however, the coexistence of three four or even five autoimmune diseases is extremely rare [1,2]. Disorders of an autoimmune nature are known to occur with increased frequency in patients with another autoimmune disease. 20 percent of patients with autoimmune diseases have a tendency to develop additional autoimmune disorders [3].

Aims of this case presentation were to investigate the 22 years old patient with Lupus erythematosus for three years and autoimmune thyroiditis for one year, regarding other possible autoimmune conditions and to establish a treatment to control the diseases.

## CASE REPORT

A 22 year old patient with Lupus erythematosus for three years and autoimmune thyroiditis for one year was referred to our dermatology department. Some circular hairless patches on the beard appeared about three months ago and white depigmented disseminated areas started one month ago (Figs. 1 and 2). The

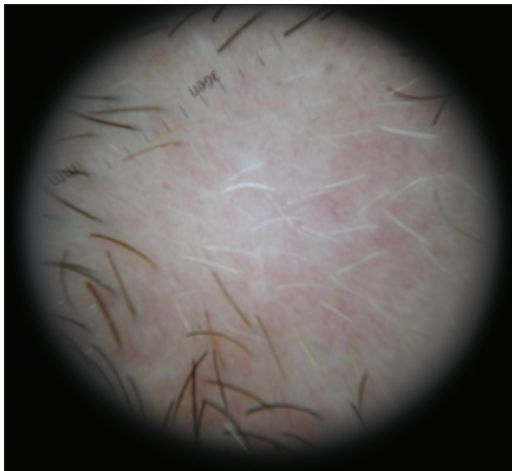
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**Figure 1:** Alopecia Areata and Vitiligo patches on the face.



**Figure 2:** Dermoscopy of a patch of Alopecia Areata and Vitiligo.

modified laboratory findings were: total IgE 530 UI/mL, Anti-SSA (anti-RO) antibodies > 200 IU/mL, SSB negative, Antinuclear antibodies (ANA) positive and fine speckled, Lupus anticoagulant testing positive, Anti-thyroid peroxidase antibodies 951 UI/ml, TSH 4,7  $\mu$ UI/mL (one year ago TSH was 19,9  $\mu$ UI/mL but after sodium levothyroxine 50 mg daily decreased). The diagnosis of multiple autoimmune syndrome (MAS) type 3 including Lupus erythematosus, autoimmune Thyroiditis, Alopecia Areata and Vitiligo was established [4]. Because Alopecia Areata and Vitiligo appeared despite the fact that patient was on Prednisone 30 mg/day we recommended a higher dose 40 mg/day and for the dermatologic conditions-Vitiligo and Alopecia Areata, tacrolimus ointment 0,1%, and a mild topical steroid-hydrocortisone butyrate 0.1% cream After 1 month the first white hairs were visible

clinically and by dermoscopy but vitiligo did not improve.

## DISCUSSIONS

Endocrine autoimmunities are associated with autoantibodies that react to specific antigens, whereas patients with collagen diseases synthesize immunoglobulins that recognize nonorgan-specific cellular targets, such as nucleoproteins and nucleic acids. Cellular autoimmunity is important in the pathogenesis MAS. Histologic examination of the affected tissues has demonstrated similar results, that is, mononuclear infiltrate composed mainly of lymphocytes, macrophages, natural killer (NK) cells, and plasma cells [5]. The existence of one autoimmune disorder helps lead to the discovery of other autoimmune conditions.

## CONCLUSIONS

To our knowledge there are no previous citations in the medical literature about the association between Lupus erythematosus, autoimmune Thyroiditis, Alopecia Areata and Vitiligo so this case presentation could be the first one reported with this conditions. Our experience is limited to this case and the challenge is to control the progression of the diseases in a team with the rheumatologist and the endocrinologist regarding the corticotherapy dosage, thyroid management and combined with an efficient topical treatment.

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