



Association of Vitiligo with Autoimmune Thyroid Diseases

KEYWORDS

Vitiligo, Thyroid diseases, Autoimmune

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ABSTRACT BACKGROUND:

Vitiligo is considered the most frequent depigmenting disorder. Although its pathogenesis is uncertain, believed to be autoimmune in origin. This theory is based on the coexistence of vitiligo with autoimmune and thyroid diseases.

OBJECTIVES:

To estimate the prevalence of the association of vitiligo with autoimmune thyroid diseases.

METHODS:

A cross-sectional study was conducted through analysis of the medical records of patients diagnosed with vitiligo in our Outpatient Clinic of Dermatology. The clinical and laboratorial characteristics of these patients were assessed.

RESULTS:

90 patients of vitiligo evaluated; 56 patients were female, with a mean age of 37.14 years and mean onset age of 25.25 years. Autoimmune thyroid diseases were found in 20%. Other autoimmune diseases were identified in 5.5%. Patients with positive thyroid autoantibodies showed a probability of extension of vitiligo greater than 25%. There was no statistical difference with regard to the clinical characteristics of vitiligo in patients with or without autoimmune thyroiditis with hormonal change.

CONCLUSION:

The findings of this study are similar to those obtained by other authors, showing that autoimmune thyroid diseases are more common in patients with vitiligo.

Introduction

Vitiligo is a common, acquired, depigmentary disorder of the skin that affects 1-2% of the general population, without racial or sex differences.¹ Although the exact aetiology of the condition is unknown, probably an autoimmune in origin and several observations support this theory. Many studies have described an association of vitiligo with other autoimmune disorders such as thyroid disease, Addison's disease, diabetes mellitus, alopecia areata.^{2,3}

Henceforth we studied the occurrence of autoimmune thyroid diseases in vitiligo patients in our dermatology opd.

Materials and Methods

The cross-sectional study was conducted in patients of vitiligo attended Dermatology OPD. This study were included 90 vitiligo patients, we found out their medical records with all routine and specific investigations specially for thyroid disease like thyroid profile and thyroid autoantibodies (anti-TPO). Pregnant females and patients who had already having autoimmune diseases were excluded from the study. Then we studied the different variables like age, sex, mean age of onset, type of vitiligo and its presentations.

Results

Out of the 90 patients of vitiligo evaluated; 56 patients were female, with a mean age of 37.14 years and mean onset age of 25.25 years. Autoimmune thyroid diseases were found in 20%. Other autoimmune diseases were identified in 5.5%. Patients with positive thyroid autoantibodies showed a probability of extension of vitiligo greater than 25%. There was no statistical difference with regard

to the clinical characteristics of vitiligo in patients with or without autoimmune thyroiditis with hormonal change.

Discussion

This study revealed a significant association between vitiligo and thyroid autoimmunity. Pathogenesis of vitiligo involves complex genetic, immunological, neural and self-destructive mechanisms.⁴ Higher prevalence Akay et al. (31%) and Iacovelli et al. (16%) though a lower

occurrence was noted by Narita et al. and Handa and Kaur.^{5,6,7,8} In our study it was 20%.

The majority of vitiligo patients are healthy and have no associated pathology, but it is well-known that vitiligo is frequently associated with other autoimmune disorders such as thyroid dysfunction, Addison's disease, diabetes mellitus, alopecia areata etc.^{9,10}

In our study, though none of the patient had specific clinical signs of thyroid disease, autoimmune thyroid dysfunction, but there were 18 patients (20%) had occurrence of thyroid autoantibody. In accordance to previous studies, we also demonstrated that antithyroid autoantibodies were significantly increased in vitiligo patients in comparison to healthy subjects. We detected elevated anti-TPO in 18(20%) patients with vitiligo, the frequency of anti-TPO antibodies was significantly higher in those with vitiligo. Our results are consistent with a clinical study performed by Sedighe and Gholamhossein.

All the above findings establish a clear association between vitiligo and autoimmune hypothyroidism. Gene ex-

pression studies and genomic analysis of families with generalized vitiligo and associated autoimmune disorders will be important in shedding light on the mechanisms of vitiligo pathogenesis. These studies will in turn provide novel approaches to the prevention and treatment of vitiligo and associated autoimmune diseases.¹¹ We suggest that all patients with vitiligo should be routinely subjected to thyroid screening as the diagnosis of autoimmune thyroiditis is important to avoid the negative impact of hypothyroidism on health status. Prompt intervention in all detected cases will prevent long-term morbidity and complications. More Indian studies with a larger sample size will shed further light on the association of hypothyroidism in vitiligo patients.

Conclusion

According to our study, vitiligo patients had significantly higher level of anti-TPO in comparison to the general population. Considering the fact that vitiligo usually autoimmune and associated with thyroid dysfunction, and anti-TPO being a sensitive tool for the detection of autoimmune thyroid disorders, periodic follow-up of vitiligo patients for detecting thyroid diseases is further needed.

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