

ORIGINAL RESEARCH

A Prospective study of Vitiligo and its association with autoimmune diseases in Government Dharmapuri Medical College Hospital

R. Akila¹, B. Deepa², G. Indumathi³, M. Arivumani^{4*}

¹Assistant Professor, Department of Dermatology Venereology and Leprosy, Government Dharmapuri Medical College, Dharmapuri, India.

²Assistant Professor, Department of Dermatology Venereology and Leprosy, Government Dharmapuri Medical College, Dharmapuri, India.

³Assistant Professor, Department of General Medicine Government Dharmapuri Medical College, Dharmapuri, India.

^{*4}Assistant Professor, Department of General Medicine, Government Dharmapuri Medical College, Dharmapuri, India.

Corresponding Author: Dr. M. Arivumani, Assistant Professor, Department of General Medicine, Government Dharmapuri Medical College, Dharmapuri, India.

Type of Study: Original Research Paper

Date of Acceptance: 14 December 2022

Date of Publication: January 2023

ABSTRACT

Background: Vitiligo is a chronic autoimmune pigmentary disorder. The exact etiology of vitiligo is not known, though it is considered to be genetic, autoimmune skin disorder in which there is loss of melanin pigment. Vitiligo can occur at any age. Vitiligo can be localised, generalized, mucosal or acro mucosal. Since Vitiligo is a autoimmune disorder it can be associated with other autoimmune disorders. Various modalities of treatment became available, but still produces significant social stigma and leads to psychological impact on the patient. Its need of the hour to create awareness to the public regarding the available treatment options. **Aim:** To study the association of vitiligo with other autoimmune diseases.

Methods: 100 cases of vitiligo patients attending Dermatology outpatient Department at Govt Dharmapuri Medical college hospital during the period of January 2022 to December 2022 were included in the study. Informed consent were obtained from all the patients and from parents in case of children. Detailed history was obtained and Dermatological/Systemic examination were done using a proforma. Necessary investigations were done. Physician consultation and screening was made for all patients regarding other autoimmune disease association.

Results: Majority of patients enrolled in our study were females. The youngest patient recorded in our study is 8 years. Exposed areas are more involved. Leg is the most common site involved followed by hands. Type of vitiligo doesn't have much correlation with other autoimmune disorder association. Out of 100 patients 28 patients had other autoimmune diseases. Few patients had more than one autoimmune problem. 9 had type 1 Diabetes Mellitus and 8 had Pernicious anemia. 2 patients had alopecia areata, 11 patients and hypothyroidism, 2 had graves disease. 1 patients had Morphea, 3 had Systemic lupus erythematosus and 1 had associated systemic sclerosis. Female patients had more association of vitiligo and other autoimmune disorders.

Conclusion: This study clearly shows the association of Vitiligo and other autoimmune disease and confirms vitiligo is a part of systemic autoimmune response. Vitiligo can be a presenting feature

of other Systemic autoimmune diseases. So meticulous screening of vitiligo patients is necessary to diagnose other autoimmune diseases early.

Keywords: Vitiligo, Autoimmune disease

INTRODUCTION

Vitiligo is an pigmentary disorder due to progressive melanocytopenia of unknown etiology whose exact aetiopathogenesis is not known. The pathogenic theories suggested are-Immune, Neural, Self-destruction and Genetic Hypothesis.¹ It affects all races and both sexes are equally involved. In India incidence is 3-4% and 20% of patients have family history of vitiligo. Vitiligo affects various parts of the body. Alteration in immune surveillance is an important cause for destruction of melanocytes. So these patients have associated other autoimmune disorders like Diabetes Mellitus, Hypothyroidism, Graves disease, Pernicious anemia, alopecia areata, systemic lupus erythematosus localised scleroderma and systemic sclerosis.

MATERIALS AND METHODS

100 cases of vitiligo patients attending our outpatient department from January 2022 to December 2022 were included in the study. Informed consent was obtained from all the patients and parents in case of children. Diagnosis was made clinically and data were collected using the proforma about their age, sex, past history, associated illness and family history and recorded. Thorough dermatological and systemic examination was done. Physician opinion was obtained. Patients with postinflammatory hypopigmentation were excluded from the study. Blood investigations like hemoglobin, blood sugar (fasting and postprandial), thyroid profile, autoimmune profile were also done for necessary patients.

RESULT

Out of 100 patients 63 were female (63%) and 27 were males (37%). 13 (13%) were below 12 years in paediatric age group and 87 (87%) were adults. The youngest patient in our study is 8 years and oldest patient was 76 years.

Table 1: Sex distribution among children and adult patients of Vitiligo

Sex	Children	Adult	Total
Male	5	32	37
Female	8	55	63
Total	13	87	100

Family history of vitiligo was present only in 8 % of cases which shows less influence of genetic factors. Mucosal vitiligo was seen in 9 patients and acromucosal vitiligo in 3 patients. Localised vitiligo was seen in 54 patients and Generalised vitiligo in 34 patients.

Table 2: Type of vitiligo and its percentage

	No.of cases	Percentage
Mucosal	09	09%
Acromucosal	03	03%
Localised	54	54%
Generalised	34	34%

Cases were evaluated for other associated autoimmune disorders which is shown in table 3. Type 1 Diabetes mellitus was present in 9 patients, 8 patients had pernicious anemia and 2 had alopecia areata. Hypothyroidism was seen in 11 patients and Graves disease in 2 patients. 2 patient had associated Systemic Lupus erythematosus and Systemic sclerosis and Morphea one each.

Table 3: Percentage of other autoimmune disorders associated with vitiligo

Condition	No. of patients	Percentage
Type 1 Diabetes mellitus	09	09%
Pernicious Anemia	08	08%
Alopecia areata	02	02%
Hypothyroidism	11	11%
Graves disease	02	02%
Morphea	01	01%
Systemic lupus erythematosus	02	02%
Systemic sclerosis	01	01%

Table 4: Sex distribution of Autoimmune disorders among vitiligo patients

Condition	Male	Female
Type 1 Diabetes mellitus	02	07
Pernicious Anemia	05	03
Alopecia areata	01	01
Hypothyroidism	04	07
Graves disease	02	0
Morphea	0	01
Systemic lupus erythematosus	0	02
Systemic sclerosis	0	01

Table 4 shows clearly that autoimmune disorders associated with vitiligo has a female preponderance except for Graves disease and Pernicious anemia.

DISCUSSION

Vitiligo is a pigmentary disorder of skin caused by selective destruction of melanocytes occurring at all ages. Many theories has been proposed regarding its etiology. Though various treatment modalities have become available still this disease remains as a social enigma. Though there are studies showing no particular sex predilection in our study there is slight female preponderance (63%) when compared to males(37%) which may due to cosmetic concern. Since it is a autoimmune disorder several other autoimmune disorders can be associated with it. Though vitiligo can be associated with hypothyroidism and hyperthyroidism, the prevalence of vitiligo with hypothyroidism is higher which is also seen un our study (11%).

Hyperthyroidism was seen in two male patients. Female preponderance was seen in the distribution of autoimmune diseases among vitiligo patients in our study. Vitiligo can be associated with other autoimmune disorders like Diabetes mellitus, hashimoto’s thyroiditis, alopecia areata, SLE etc. In our study we have evaluated for associated systemic illness which showed 9% of patient had diabetes mellitus, where similar results is seen in a study by Dawber et al.

CONCLUSION

Our prospective study in 100 vitiligo cases showed a female preponderance. Our study clearly shows the association of Vitiligo and other autoimmune disease and confirms vitiligo is a part of systemic autoimmune response. Vitiligo can be a presenting feature of other autoimmune diseases. So meticulous screening of vitiligo patients is necessary to diagnose other autoimmune diseases early.

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