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A Clinical Study of Vitiligo and Associated Autoimmune Disorders - A Retrospective Study.

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ABSTRACT

Background: Vitiligo is an autoimmune disorder characterized by de-pigmentation affecting 1% of the population Vitiligo is associated with a lot of other autoimmune disorders. Aim of the study was to determine the prevalence of other co- morbid autoimmune disorders in vitiligo patients in our Institution. **Methods:** A total of 100 patients with vitiligo who attended our Hospital vitiligo clinic were included. Patients with lesion which were less than 1cm in size and inactive vitiligo were excluded from the study. The co- morbid autoimmune disorders were collected and analyzed. **Results:** In our study group of 100 patients with vitiligo, 30 patients had autoimmune disorders. Out of the 30 patients, 20 patients had Diabetes Mellitus and it was found out to be the most common autoimmune disorder. Among the rest of 10 patients, 5 patients had pernicious anemia, 2 patients had alopecia areata, 2 patients had psoriasis vulgaris and 1 patient had linear morphea. **Conclusion:** Most of the patients with vitiligo have one or more autoimmune disorder which supports the autoimmune theory of vitiligo. It therefore mandatory to screen all patients of vitiligo for autoimmune disorders.

Keywords: Autoimmune disorders, vitiligo, Diabetes mellitus.

INTRODUCTION

Vitiligo is an autoimmune disorder characterized by depigmentation of skin. Lesions are well defined milky white macules of variable sizes and without variation in texture of skin. In some individuals hair is also involved and it indicates poor prognosis .Sun exposed areas are initially involved. Appearance of skin lesions may be sudden and violent or insidious. Globally 1% of people are affected by vitiligo. Incidence of vitiligo is very high in India and Mexico.[1].

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This was the reason that stimulated us for studying the patients who were suffering from vitiligo. Vitiligo runs in families. In India positive family history has been reported in 6 to 18% of cases.[2] First degree relatives have increased frequency of the same autoimmune diseases.[3] Its heritable constitutional predilection has found to be 20 to 30 %.[4] Polygenic multifactorial susceptibility that is triggered by environmental factors has been implicated in initiation of the disease. HLA DR4 in coloured people and HLA-B13 in Morracean Jews HLA_BW 35 in Yemenite Jews have been reported.[5] Risk factors includes a family history of autoimmune disorders[4]. Some of them also suffer from autoimmune disorder like Hashimoto's thyroiditis, Pernicious anemia, Diabetes Mellitus, Myasthenia gravis, Psoriasis, Addison's disease, Some disorders like Diabetes Mellitus are more common.[6] Increased auto-antibodies to melanocytes and tyrosinase have been demonstrated in sera of patients.[7] Similarly other auto-antibodies have also been demonstrated.[8]

Aim

To study the prevalence of other co- morbid autoimmune disorders in vitiligo patients in our Institution.

MATERIALS AND METHODS

This retrospective study was conducted in Department of Dermatology, Madras Medical College. Patients who attended the vitiligo clinic on in department of dermatology during the period of January 2016 to June 2016 medical records were analyzed. Patients with vitiliginous patch of size less than 1 cm and inactive lesion were excluded from the study. All data were collected from vitiligo clinic register.

RESULTS

Our study group had a total of 100 patients and 20 (20%) of them were being treated for Type 1 Diabetes Mellitus. The next most common disorder was pernicious anemia. In our study group 5 (5%) of our patients had pernicious anemia and were being treated in department of Hematology. Among the rest of the patients, 2 had Psoriasis Vulgaris (2%), 2 had Alopecia areata (2%) and one of them had Linear Morphea.

Table 1: Distribution of Types of Auto Immune Disorders

Disease	Number of Patients	Males	Female
Diabetes Mellitus	20	5	15
Anaemia	5	2	3
Psoriasis	2	2	-
Alopecia areata	2	-	2
Morphea	1	-	1

Our study group had 50 male patients and 50 female patients. Sex distribution of auto immune disorders shows that 42% of female patients had autoimmune disorders when compared to males who had only 18% of disorder [Table 1].

Diabetes mellitus was the most common disorder among the male patients with vitiligo. In our study 10% of them had Diabetes mellitus, 4% had Psoriasis and 4% had pernicious anemia. Clustering of Diabetes mellitus in age group of 40 to 55 years was also seen.

In our female patients, 15% of them suffered from Type 1 Diabetes Mellitus, 6% of them had pernicious anemia, 4% had Alopecia areata, and 2% had Morphea. Clustering of Diabetes Mellitus in age group of 40 to 65 years was seen. In our study Diabetes mellitus was found to be the most common disorder and more females (75%) were affected by the disease [Figure 1].

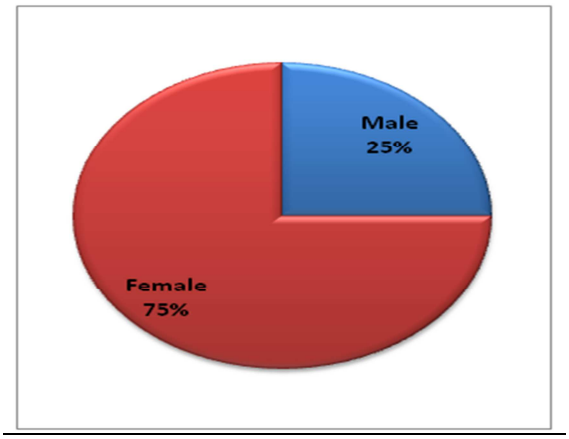

Figure 1: Distribution of Types of Auto Immune Disorders

DISCUSSION

In our patients with vitiligo, the most common autoimmune disorder was Diabetes Mellitus. All were getting treated at Diabetology department with insulin or oral hypoglycemic agents. Their age groups were roughly between 40 and 65 years. More women were affected by diabetes mellitus .A similar study conducted by Dutta et al in India also concluded that Diabetes mellitus was common autoimmune disorder among Indians who were also suffering from vitiligo.[9] Next common disorder in our study was pernicious anemia with a prevalence of 5%. Patients in our study were being treated in Hematology department for the same. Among them 3 were females and 2 were males. Gill et al study shows that the prevalence of pernicious anemia was 0.5 %.[7,10]

Next common disorder that was seen was Alopecia areata and psoriasis vulgaris. Alopecia areata were seen in female children between the age group of 5 and 10 years and psoriasis vulgaris was seen in male adults between the age group of 30 & 45 years. In Gill et al study prevalence of Alopecia areata 3.8% and psoriasis was not reported. Linear morphea was diagnosed in a 13 year old female child in the left leg. Biopsy was done and to confirm the diagnosis and suitable treatment was initiated in one patient. No such reference to Morphea has been quoted in Gill et al study. A study conducted by Gill et al in Detroit and published in JAAD in February 2016 has been taken for comparison. In their study the autoimmune disorders were Thyroid disease (12.9%), Alopecia areata (3.8%), Inflammatory bowel disease (0.9%.), pernicious anemia (0.5%), Discoid lupus erythematous (0.3%), Guillain barre syndrome (0.3%), Myasthenia gravis (0.2%) and Sjogren's syndrome (0.2%).

CONCLUSION

Since vitiligo itself is an autoimmune disorder it is mandatory to screen all vitiligo patients for other autoimmune disorder. This further builds the theory of autoimmunity in development of vitiligo. Type 1 Diabetes was the most common co-morbid disease detected. Women suffered more autoimmune disorders compared to men along with vitiligo.

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