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ORIGINAL ARTICLE

Vitiligo and associated autoimmune disorders: A retrospective hospital-based study in Mumbai, India

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KEYWORDS
Vitiligo;
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Summary
Background: It is a hospital based study focusing on epidemiological aspects of vitiligo and association with autoimmune disorders. There are few studies elucidating the association of autoimmune disorders with vitiligo in the Indian population. Our study is a small attempt in this direction.
Aim: To study epidemiological parameters of vitiligo and to study coexistence of autoimmune disorders.
Materials and methods: Records of 33,252 new patients attending the dermatology outpatient department from June 2002 to June 2008 were analysed for the presence of vitiligo and details of important epidemiological variables, and associated autoimmune disorders of these patients were collected and analysed.
Results: Total number of vitiligo patients was 204. Proportion of vitiligo patients was 0.61%. Male:female proportion was almost equal. Family history of vitiligo was seen in 3.43% of cases.
Associated autoimmune disorders were seen in 2.94% cases and were mainly skin associated autoimmune diseases (morphoea, alopecia areata, discoid lupus erythematosus, and pemphigus erythematosus) except for one case of Grave's disease.
Conclusion: Association of vitiligo with other autoimmune diseases emphasizes autoimmune aetiology of vitiligo. This study also emphasizes the need to actively look for, and if necessary, investigate patients with vitiligo for other autoimmune diseases.

Introduction

Vitiligo is characterised by the presence of depigmented macules due to the destruction of cutaneous melanocytes. The psychological impact of vitiligo on the patient can be tremendous. The exact aetiology remains obscure, but several hypotheses have been implicated: neural, autoimmune and cytotoxic.[1–3] The autoimmune aetiology of vitiligo is the most widely accepted, especially for generalised vitiligo, and forms the basis of several therapies. Frequency and type of autoimmune diseases associated with vitiligo is variable as

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is evident in different studies/surveys conducted across the world, probably because of the different patient populations studied.[4–8] Also, studies have shown increased frequency of same autoimmune diseases in first degree relatives of the patients studied.[4] Such data indicates that individuals can be genetically predisposed to a specific group of autoimmune disorders that includes vitiligo. Our study is an attempt to focus on the coexistence of autoimmune disorders in vitiligo.

Aim

To study epidemiological parameters and coexistence of autoimmune disorders with vitiligo.

Objectives

(1) To study prevalence of vitiligo in patients attending the dermatology outpatient department (OPD) during the years June 2002 to June 2008.
(2) To study demographic variables associated with patients having vitiligo.
(3) To study the coexistence of autoimmune disorders with vitiligo.

Materials and methods

Records of 33,252 new patients attending dermatology OPD between June 2002 and June 2008 were analysed retrospectively for the presence of vitiligo and coexistence of autoimmune disorders as per history and examination. The decision to select time period was random.

Structured proforma was devised, and standardised information about individual subject including demographic variables and associated autoimmune diseases was collected, once the record showed the presence of vitiligo. Since our department has a vitiligo clinic, detailed information about all vitiligo patients is maintained in a register and was easily retrieved.

A master chart was prepared for detailed information about vitiligo patients. To estimate overall prevalence of vitiligo in new patients attending dermatology OPD 95% confidence interval of prevalence of vitiligo was calculated. Patients were categorised as per their demographic variables, i.e. age, sex, type of vitiligo, presence of associated autoimmune disorders, family history of vitiligo (in first degree relatives) and family history of associated autoimmune disorders. Depending on the nature of associated autoimmune disorder, information about necessary investigations (e.g. skin biopsy, hormonal tests) was also scrutinised to confirm the diagnosis of the associated autoimmune disorder.

Results

1. *Demographic characteristics*: The total number of vitiligo patients studied was 204. The proportion of vitiligo patients was 0.61% (95% confidence interval was 0.53–0.69%). *Age distribution*: Age group of 10–20 years accounted for maximum number of patients (30.39%). Mean age was 24 years. The youngest patient observed having vitiligo was six months old and the oldest patient observed was 79 years old. Females (104) constituted 51% and males (100) were 49% (M:F ratio 1.04:1).
2. *Family characteristics*: Family history of vitiligo in first degree relatives was found in 3.43% of patients. There was no family history of any autoimmune disorders.
3. *Clinical features of vitiligo*: 66% cases were found to have localised vitiligo (<20% of body surface involvement), 15% had generalised vitiligo. 13% had acral/acromucosal/mucosal vitiligo and the least common type observed was segmental vitiligo (6%).
4. Associated autoimmune disorders were present in 2.94% of the patients (Table 1). These were two cases of morphoea (0.98%) (Fig. 1), and one case each of Graves' disease (0.49%) (Fig. 2), alopecia areata (0.49%) (Fig. 3), discoid lupus erythematosus (0.49%) (Fig. 4), and pemphigus erythematosus (0.49%) (Fig. 5). Of these, two patients belonged to an older age group (>40 years) and four patients belonged to younger age group (<20 years). Three patients had localised vitiligo, one patient had generalised vitiligo, one patient had acromucosal vitiligo and one patient had mucosal vitiligo.

Figure 1 Vitiligo on the face with morphoea on the volar aspect of right wrist.

Discussion

Vitiligo is a multifactorial disorder, autoimmune hypothesis being the most important in the pathogenesis of vitiligo. The autoimmune hypothesis of vitiligo primarily focuses