Vitiligo and auto immune diseases: A survey of 100 patients

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Vitiligo is an autoimmune skin disease which is characterized by depigmented patches due to loss of pigment cells. Evidence suggests that cell-mediated immunity plays a role in melanocyte destruction while some patients have antibodies to melanocytes or melanocytic proteins.

Vitiligo is strongly associated with a number of autoimmune disorders. Autoimmune thyroiditis is the most prevalent disease with a prevalence of 21% [1].

Diabetes mellitus type I is found in 1-7% of the patients with vitiligo [2] and pernicious anemia is reported in 5% of the vitiligo patients [3].

The goal of this study was to determine the association of vitiligo with other autoimmune diseases (diabetes, thyroid dysfunction, pernicious anemia) in Iranian patients.

From January 2009 until January 2010, one hundred vitiligo patients were

randomly selected (through simple random selection) from the outpatient clinic of Razi

Hospital.

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For each patient, Fasting Blood Sugar (FBS), Thyroid Stimulating Hormone (TSH, measured by IRMA (pars kit normal limits: 0.3-3.5 mIU/ml)), free T4, free T3 (measured by the RIA method (pars-kit)), anti Thyroid Peroxidase antibodies (TPOs) and CBC were evaluated. All patients underwent thyroidal physical examination for the presence of goiter. For patients with laboratory findings showing hypo or hyperthyroidism, we performed more examinations in cooperation with endocrinologists. The Schiling test was requested for cases with macrocytic anemia to detect pernicious anemia.

In cases with FBS ≥ 125, Glucose Tolerance Test (GTT) was performed; patients received 75 mg glucose and their Blood Glucose (BS) was measured after 2 hours. BS ≥ 200 was considered as diabetes.

All patients were asked to sign informed consent forms prior to inclusion in the study. Ethical committee of Tehran University of Medical Sciences approved the study.

Fifty two (52%) patients were male and forty eight (48%) were female. The mean age of the participants at the time of study was 42.1 years. Twenty five cases (25%) reported a positive family history of vitiligo. Upper limbs were the most and genitalia were the least frequent sites of involvement.

Ten cases (10%) had FBS ≥125 (mg/dl) in two separate evaluations, and their GTT tests were impaired, too. Four cases (4%) had elevated FT4 and FT3 levels and less than normal THS level while six (6%) had more than normal TSH levels and less than normal FT4 and FT3. TPO antibodies were positive in 21 patients (21%) and the diagnosis of the Hashimoto disease was confirmed in 2 hypothyroid patients by an endocrinologist. Goiter was also detected in these two patients (2%). Macrocytic and pernicious anemia were not proved in any

patients while ten cases (10%) were determined to have microcytic anemia.

The most frequent autoimmune disease reported in the family members was thyroid dysfunction followed by diabetes.

We found that 2% of the study population presented with autoimmune thyroid dysfunction which was lower than expected. Many researchers have reported that thyroid antibodies are present in 18% to 50% of the vitiligo cases [4].

We found a higher rate of diabetes in our series (10%); however, it was lower than the rate reported by a previous study on a Romanian community that reported diabetes in 20% of the vitiligo patients [5]. Ahmed et al evaluated 350 diabetic patients in Pakistan and detected vitiligo in 5.7% of those patients [6]. The exact cause of vitiligo in type 1 diabetes is not clear. The difference in rates is due to genetic differences in different populations.

In the current study, none of the patients had pernicious anemia while pernicious anemia is reported in 5% of the vitiligo patients [3].

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