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AUTOIMMUNE DERMATOLOGICAL DISORDERS ARE ASSOCIATED WITH INCREASED RISK OF DEVELOPING ATRIAL FIBRILLATION - A CASE CONTROL STUDY

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BACKGROUND: Atrial fibrillation (AF) is the most common sustained arrhythmia worldwide. However, its pathogenesis is multifactorial and not completely understood. Previous studies have shown that autoantibodies are present in some patients with AF, raising the possibility of an autoimmune etiology. In this study we sought to investigate the association between autoimmune dermatological disorders (ADD) and AF.

METHODS: We performed a case-control study using the Olmsted County AF database which included all patients with incident AF from 1980 to 2000 (n=4383) and their age- and sex-matched controls. Prevalence of ADD including bullous pemphigoid, pemphigus vulgaris, psoriasis, vitiligo, idiopathic urticaria, and alopecia areata were compared between the 2 groups. Association between ADD and AF was studied using conditional multivariate logistic regression. Survival curves were compared using log-rank test.

RESULTS: The proportion of patients with ADD in the AF group was 7.4% (n=323) and 5.3% (n=232) in the control group, p , 0.0001. Univariate analysis showed that ADD increased the odds of AF by almost 2-fold (OR 1.82, 95% CI 1.54-2.14, p , 0.001). After adjusting for hypertension, diabetes, cardiomyopathy, obstructive sleep apnea, coronary artery disease, peripheral vascular disease, renal insufficiency, congestive heart failure, obesity, malignancy, and smoking, ADD remained independently predictive of the development of AF (OR 1.27, 95% CI 1.05-1.54, p = 0.01). ADD patients with AF were found to have poorer survival compared with those without AF (p , 0.001).

CONCLUSIONS: Autoimmune dermatological disorders were found to be independently associated with atrial fibrillation. The development of AF had a negative impact on the survival of patients who had autoimmune dermatological disorders.