ABSTRACT BOOK

ABSTRACTS

24TH WORLD CONGRESS
OF DERMATOLOGY
MILAN 2019

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10 – 15 JUNE 2019
MILAN, ITALY

PSORIASIS

SERUM CRP, ENDOGLIN, E-SELECTIN, AND TIE-1 AS BIOMARKERS IN PSORIASIS

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Introduction: Although the majority of patients with psoriasis are diagnosed clinically, skin biopsy is often required for diagnosis in atypical cases or early in the disease process. Even then, histopathological changes may be unequivocal in the primary stages of psoriasis. Development of highly sensitive and specific biomarkers can aid dermatologists in diagnosis and monitoring of disease progression. Additionally, some markers could serve as therapeutic targets for the development of new medications.

Objective: Our objective was to identify biomarkers that could assist in the diagnosis, monitoring, and treatment of psoriasis.

Materials and Methods: Serum samples from psoriasis patients, disease controls, and healthy controls were obtained from the Center for Clinical Studies in Webster and Houston, Texas. Initially, the sera of psoriasis patients (N = 7) and healthy individuals (N = 14) were used for protein array screening of 274 potential biomarkers. Multiple biomarkers were significantly elevated in psoriasis patients as compared to healthy controls, and four of these biomarkers (CRP, Endoglin, E-Selectin, and Tie-1) were chosen for enzyme-linked immunosorbent assay (ELISA)-based validation study of serum samples from an independent cohort of psoriasis patients (N=73), disease controls (atopic dermatitis, N=9), and healthy, gender and age-matched controls (N=25).

Results: Four serum biomarkers (CRP, Endoglin, E-Selectin, and Tie-1) were significantly elevated in psoriasis patients (P<0.01) compared with healthy gender and age-matched controls as demonstrated with ELISA. These biomarkers also correlated with increasing severity using Psoriasis Area Severity Index (PASI) scores. CRP and Tie-1 demonstrated significant elevation between psoriatic arthritis and non-psoriatic arthritis patients (CRP, P=0.002, Tie-1, P=0.01).

Conclusions: An antibody-based protein array demonstrated several previously discovered biomarkers of psoriasis (CRP, Endoglin, and E-selectin) and the novel Tie-1. Further

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research is needed to ascertain the role of these serum biomarkers in diagnosing and monitoring psoriasis and its disease-specific sequelae such as arthritis.

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