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EVALUATION OF SYSTEMIC INFLAMMATORY BIOMARKERS AND RISK OF CARDIOVASCULAR DISEASE IN PSORIASIS VULGARIS PATIENTS

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ABSTRACT : This is an observational case-control study. It was carried out at the dermatology outpatient clinic in Al Fayha'a teaching hospital during the period from November 2020 to June 2021. Doctor permission was obtained and the patient sign a consent form. A hundred and twenty participants of both sexes were randomly selected and categorized into three main groups: psoriasis, ischemic heart disease, and healthy control. The first group includes forty psoriasis patients who have classical psoriatic lesions with a well-demarcated salmon color plaque and silvery. There were 23 male and 17 female psoriatic patients with a median (30.50), age range: 7-71 years. The second group includes patients with well-documented ischemic heart disease diagnosed by a cardiologist. There were 17 male and 23 female cardiovascular diseases patients (control positive) with a median (41.50), age range: 13-70 years. Third group of forty participants represents apparently healthy subjects (control negative). There were 26 males and 14 females with a median (36), age range: 2-68 years as a control group. A total of 3 ml of peripheral whole blood was taken from patients, healthy controls and patients with cardiovascular diseases to be used for ELISA test for TPAI-1, VEGF-A, IL-17 and protein analyzer P54 according to manufacture protocol. The results revealed highly significant changes in the TPAI-1, VEGF-A, IL-17, hs-CRP in psoriatic patients comparing to the healthy group with a median of 2.9 ng/ml, 3552.5 ng/ml,75.9 ng/ml for IL-17 and 4.55 mg/L, respectively (P-value <0.0001). In the CVD group, there were also highly significant changes in these four parameters comparing to the control negative group with a median of 6.1 ng/ml for TPAI-1, 5434.00 ng/ml for VEGF-A,76.400 ng/ml for IL-17 and 9.4 mg/L for hs –CRP (p-value <0.0001). Psoriasis severity showed significant effect only on serum IL-17 levels, but no effect on TPAI-1, VEGF-A and hs-CRP.

Key words : Psoriasis, cardiovascular disease, immune dysregulation.

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INTRODUCTION

Psoriasis is a chronic inflammatory skin disease with a strong genetic predisposition and autoimmune pathogenic role (Rendon and Schakel, 2019). Psoriatic lesions are sharply demarcated silvery scale erythematous plaques that characterize the most common form of psoriasis, occasionally sterile pustules are seen. The most common sites of involvement are the scalp, elbows and knees, followed by the nails, hands, feet and trunk (including the intergluteal fold). There are also subcategories of psoriasis types. These appear differently depending on the location of the body like scalp, nail, palmoplantar psoriasis. Psoriasis is not contagious regardless of type (Bilal *et al*, 2018). The worldwide prevalence is about 2%, but varies according to the region (Rousset and Halioua, 2018). Incidence data confirmed a clear bimodal age pattern in psoriasis onset, with the first and second peaks at around 30-39 and 60-69 years of age, respectively, then decreased towards the end of life (Iskandar *et al*, 2021). Approximately 125 million people worldwide have psoriasis. Patients with psoriasis experience substantial morbidity and increased rates of inflammatory arthritis, cardiometabolic diseases and mental health disorders (Armstrong and Read, 2020).

CONCLUSION

Psoriasis is a chronic inflammatory skin disease that involves an ongoing systemic inflammatory process that carries the high potential risk of developing cardiovascular disease.

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