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Thesis Title	Evaluation of some serum adipokines, oxidized low density lipoprotein and lipid profile before and after methotrexate treatment of chronic plaque psoriasis (A case-control study)			
Year	2015			
Abstract	<p>Psoriasis is a common inflammatory autoimmune skin disease that affects 2–4% of the world population. T-cells infiltration, interleukins and cytokines including adipocytokines like visfatin, high molecular weight-adiponectin(HMW-adiponectin) and retinol binding protein-4(RBP-4), together with oxidized low density lipoprotein(ox-LDL) have been implicated in psoriasis pathogenesis. Many epidemiological evidence speculate that patients with psoriasis may be more obese compared with the general population. Although the definite mechanism underlying the correlation between obesity and psoriasis is uncertain, several studies had hypothesized that, the secretion of pro-inflammatory cytokines by adipose tissue may deteriorate psoriasis.</p> <p>Objectives: The aim of the present study is: To investigate the changes of serum visfatin level, HMW-adiponectin, RBP-4, and oxidized-LDL in psoriatic patients before and after treatment with oral methotrexate therapy in comparison to their levels in control subjects to evaluate the impact of this drug on their serum levels and on psoriatic lesions by measuring psoriasis area and severity index(PASI). To ascertain the association between these adipocytokines and oxidized-LDL with body mass index(BMI) and psoriasis area and severity index(PASI) and their predictive value in plaque psoriasis . Finally, to establish the role of above mentioned parameters in the pathogenesis of psoriasis.</p> <p>Subjects and Methods: A total of 86 subjects (43 with Psoriasis and 43 healthy controls) were enrolled in this study. Their mean age was (41± 14.37) for patients, and (35.81± 18.66) for the control</p>			

group. The study conducted in dermatology outpatient clinic in Merjan Teaching Hospital in Hilla City, and investigations were done in laboratory units of the hospital through the period from June 2013 to September 2014. The sera obtained from blood were used to determine the level of serum visfatin, HMW-adiponectin, RBP-4, oxidized-LDL by enzyme-linked immunosorbent assay (ELISA), while lipid profile levels were estimated by spectrophotometric kits. Assessment of psoriasis disease activity and methotrexate efficacy were done by psoriasis area and severity index (PASI) score and methotrexate effects on serum levels of the above mentioned adipokines and oxidized low density lipoprotein.

Exclusion criteria include: any person with hypertension, diabetes mellitus, pregnancy, smoking, alcoholism, and other medical diseases even other types of psoriasis disease.

Results:

Results of this study showed significant increase ($p < 0.05$) of serum visfatin, HMW-adiponectin, and oxidized-LDL concentrations, and significant decreases ($p < 0.05$) of retinol binding protein-4 (RBP-4) concentration in sera of plaque psoriasis when compared with control group. There was a significant correlation between oxidized-LDL and visfatin, HMW-adiponectin and retinol binding protein-4 ($r = 0.81, 0.68, -0.77$) ($p \text{ value} < 0.001$) respectively. Regarding the anthropometric parameters, this study shows no correlation between visfatin, HMW-adiponectin, RBP-4, oxidized-LDL and body mass index (BMI) ($r = 0.121, 0.043, -0.170, -0.049$) respectively ($p > 0.05$). The findings of the present study confirm a significant association between visfatin, HMW-adiponectin, RBP-4 and oxidized-LDL and PASI score ($r = 0.77, 0.64, -0.77, 0.72$) ($p < 0.001$) respectively. Additionally, there was a significant mean difference in lipid profile in serum of psoriatic patients when compared to control subjects ($p \text{ value} < 0.001$). Finally, the impact of systemic methotrexate on above adipocytokines and oxidized-LDL was determined by significant reduction of their levels after treatment and by a significant mean difference in PASI score before and after treatment in psoriatic lesions size.

Conclusions:

Results obtained by this study indicate that some adipocytokines including serum visfatin, HMW-adiponectin and RBP-4 levels, in addition to oxidized-LDL measured in patients with plaque psoriasis were closely associated with disease severity and could be used for prediction and treatment follow up.