Serum Lipid Profile in Patients with Psoriasis

PSÖRİAZİSLİ HASTALARDA SERUM LİPİD PROFİLİ

Serap UTAŞ*, Hatice PAŞAOĞLU, Sabahattin MUHTAROĞLU***,**
Ümit **ÜNVER****,** Cengiz **UTAŞ*****, Fahrettin KELEŞTİMUR*******

* Yrd.Doç.Dr.Erciyes University Medical School, Department of Dermatology,
** Doç.Dr.Erciyes University Medical School, Department of Biochemistry,
*** Uz.Dr.Erciyes University Medical School, Department of Biochemistry,
**** Prof.Dr.Erciyes University Medical School, Department of Dermatology,
***** Doç.Dr.Erciyes University Medical School, Department of Internal Medicine, KAYSERİ

ÖZET

Psöriazisli hastalarda oklum vasküler hastalıklara eğilim bildirilmiştir. Bu çalışmada hiperlipideminin sekonder nedenleri ve risk faktörleri ekarte edilen psöriazisli hastalarda serum lipid profili ile hastalık süresi ve şiddeti arasındaki ilişki araştırılmıştır. Çalışmaya hafif veya orta şiddette plak veya numuler tip stabii psöriazisi olan 39 hasta ve kontrol grubu olarak 27 sağlıklı kişi alındı. Serum trigliserid, total kolesterol, HDL-kolesterol, LDL-koiesterol, Apo A-I Apo B değerleri saptandı. Psöriazisli hasta grubunda serum trigliseridi 119.2+11.4 mg/di, total kolesterol 143.7+6.5mgfdl, HDL-kolesterol43.2+1.9mg/dl, LDL-kolesterol 104.7+9.2 mg/dl, Apo A-I 125.7+4.3 mg/di. Apo B 93,2+5.2 mg/dl, sağlıklı kontrol grubunda serum trigliseridi 104 + 10.8 mg/dl, total kolesterol 136+7.2 mg/dl, HDL-kolesterol 48+2.1 mg/dl, LDL-kolesierol 109.3+8.4 mg/dl, Apo A-I 127+3.8 mg/dl, Apo B 83+5.6 mg/dl idi. Psöriazisli hastalar ve sağlıklı kontrol grubu arasında ortalama trigliserid, kolesterol (p>0.01) ve HDL-kolesterol, LDL-koiesterol, Apo A-I, Apo B değerleri arasında anlamlı fark yoktu (p>0.05). Psöriazisli hastalarda PASI skorları ve hastalık süresi ile trigliserid, kolesterol, HDL-kolesterol, LDL-kolesterol, Apo A-I, Apo B değerleri arasında korelasyon saptanamadı (p>0.05). Sonuç olarak hafif veya orta şiddette stabil psöriazis tek başına lipid profilini etkilemiyor gibi görünmektedir.

Anahtar Kelimeler: Psöriazis, Serum lipid profili

T Klin Dermatoloji 1995, 5:18-20

SUMMARY

*A predisposition to occlusive vascular disease is reported in patients with psoriasis. This study is performed to investigate the lipid profile in psoriasis and the relation with the duration and severity of the disease in whom the risk factors and secondary causes of hyperlipidemia were excluded. Thirty-nine patients with mild to moderate plaque or nummular type stable psoriasis and twenty-seven healthy subjects to be the control group were studied. Serum triglyceride, total cholesterol, HDL-cholesterol, LDL-cholesterol, Apo A-I, Apo B levels were determined. The serum triglyceride were 119.2 + 11.4 mg/dl, 104+10.8 mg/dl, total cholesterol 143.7+6.5 mg/dl, 136±7.2 mg/di, HDL 43.2+1.9mg/dl, 48+2.1 mg/dl, LDL 104.7+9.2mg/dl, 109.3*8.4 mg/dl, Apo A-I 125.7+4.3 mg/dl, 127+3.8 mg/dl, Apo B 93.2±5.2 mg/dl, 83+5.6 mg/dl, in psariatic patients and controls respectively. There was no significant difference in the mean values of triglyceride, total cholesterol (p>0.01), HDL-cholesterol, LDL-cholesterol, Apo A-I and Apo B between the patients with psoriasis and healthy controls (p>0.05). In psoriatic patients no significant correlation was found between PASI scores, disease duration compared with the triglyceride, cholesterol, HDL-cholesterol, LDL-cholesterol, Apo A-I, Apo B levels (p>0.05). As a conclusion, mild to moderate stable psoriasis alone seems not to affect the lipid profile.*

Key Words: Psoriasis, Serum lipid profile

T Klin J Dermatol 1995, 5:18-20

Received: January 10.1995

Correspondence: Dr.Serap UTAŞ
Erciyes Üniversitesi Tıp Fakültesi
Dermatoloji ABD,
KAYSERİ

This study was supported by grants from Erciyes University Research Foundation.

A predisposition to occlusive vascular disease is reported in patients with psoriasis (1). The data about the plasma lipid and lipoprotein composition in patients with psoriasis which might be related to the risk for atherosclerosis are controversial. It is not clear that if the alterations in plasma lipid profile Is a consequence of risk factors like atherosclerotic cardiovascular di-

sease, hypertension, obesity and secondary causes of hyperlipidemia in some of these previous studies (2-11).

The purpose of this study is to investigate the lipid profile in mild to moderate stable psoriasis and the relation with the duration and severity of the disease in whom the risk factors and secondary causes of hyperlipidemia were excluded.

MATERIALS AND METHODS

This study was performed in Erciyes University Gevher Nesibe Hospital between July 1992 and 1994. Thirty-nine patients with mild to moderate plaque or nummular type stable psoriasis and twenty-seven healthy subjects to be the control group were studied. Heavy smokers and alcohol abusers were excluded. The psoriatic patients and healthy subjects with normal values of fasting blood glucose levels, uric acid, blood urea nitrogen, creatinine, creatinine clearance, liver and thyroid function tests were included in the study. Standart oral glucose tolerance test with 75 g glucose and ophtalmologic investigation for diabetic or hypertensive retinopathy were negative in all subjects. Any subject who had a family history of diabetes or atherosclerosis and body mass index (kg/m^2) higher than 30 was not Included in the study. The patients did not receive any medication which is known to affect plasma lipid profile in the last 6 months. The severity and extenslveness of the disease was assesed by Psoriasis Area and Severity Index (PASI) score (12).

The samples of venous blood were obtained from the patients after 12 hours fasting and levels of serum triglyceride and total cholesterol were determined by autoanatyser (Technicon). The interassay and intraassay coefficients of variance for cholesterol levels were 1.7% and 0.8%, for triglyceride levels were 4.2% and 3.3% respectively. HDL-cholesterol seperated by precipitation of LDL and VLDL with sodium phosphotungstate with magnesium and the values of LDL cholesterol was calculated with the Friedewald formula (13). For HDL-cholesterol the interassay and intraassay coefficients of variance were 4.8% and 4.1% respectively. Apo A-I and Apo B levels were determined with immunochemistry method (Orion Diagnostica, Espoo, Finland) and the interassay and intraassay coefficients or variance for Apo A-I were 6.2% and 6.4% for Apo B levels were 3.5% and 3.7% respectively.

Student's t test and analysis of variance were performed for the statistical evaluation of the data. Values are expressed as mean ± SEM and a p value less then 0.05 was considered significant.

RESULTS

Table 1 shows the characteristics of the psoriatic patients and healthy controls. The duration of the disease was between 6 months and 14 years. The PASI scores were 11.5+1.6 (range 2.2 - 34.8) in patients with psoriasis vulgaris.

Tablo 1. Characteristics of the psoriatic patients and healthy controls

	Psoriatic patients n:39	Healthy controls n:27
Age (years)	32.3±2.2	34.4±2
Sex (F/M)	21 F/18M	15F/12M
Total cholesterol (mg/dl)	143.7±6.5	136±7.2
Triglyceride (mg/dl)	119.2±11.4	104H0.8
HDL (mg/dl)	43.2+.1.9	48±2.1
LDL (mg/dl)	104.7±9.2	109.3±8.4
Apo A-I (mg/dl)	125.7±4.3	127+3.8
Apo B (mg/dl)	93.2±5.2	83±5.6

The difference between the ages of the psoriatic patients and healthy controls was not statistically significant ($p>0.05$). There were no significant differences in the mean values of HDL-cholesterol, LDL-cholesterol, Apo A-I and Apo B between the patients with psoriasis and healthy controls ($p>0.05$). In patients with psoriasis although the mean values of triglyceride and cholesterol were slightly higher than the control group the difference was not significant ($p>0.01$). In psoriatic patients no significant correlation was found between PASI scores, disease duration compared with the triglyceride, cholesterol, HDL-cholesterol, LDL-cholesterol, Apo A-I, Apo B levels ($p>0.05$).

DISCUSSION

An increased risk for atherosclerosis has been reported in patients with psoriasis (1). Several genetic, hormonal and environmental risk factors are known to influence the development of atherosclerosis. It was suggested that psoriasis is often associated with diabetes mellitus and some patients with psoriasis have disorders of lipid metabolism (2.11-14-18). Although extensive studies on lipid metabolism in psoriasis have been done the data is still debating. Both altered or unchanged lipid or lipoprotein profile has been reported in these studies (2-11). Peserico et al. reported that only overweight psoriatic patients exhibit some metabolic abnormalities while psoriatic patients of normal weight do not differ from the general population (8). In some of these studies the causes such as obesity, high alcohol intake, heavy smoking, peripheral occlusive disease, latent diabetes mellitus, hypertension, thyroid, renal, hepatic or connective tissue diseases and the use of drugs which may have effects on lipid metabolism, were not excluded. In the other studies, altered lipid and/or lipoprotein profile is found especially in patients with severe psoriasis (6,7,11). Our study is performed in patients with mild or moderate psoriasis in whom the risk factors and the secondary causes of atherosclerosis are excluded. Recently, in a study

which has been appeared in the literature performed by Seçkin et al. no significant difference in the serum levels of triglyceride, cholesterol, HDL-cholesterol, LDL-cholesterol, Apo A-I, Apo B was found between patients with psoriasis and controls. Our findings are in accordance with this data. Also they suggested that the tendency to occlusive vascular disease might be a consequence of the increased levels of lipoprotein (a) although the difference between patients and controls were not statistically significant (19).

A high prevalence of urinary albumin excretion (UEA) which might be a manifestation of widespread atherosclerosis has ben reported (20). We recently showed that UAE was not high in selected patients with psoriasis and attributed the high prevalence of microalbuminuria in the other studies to the other factors than the psoriasis itself (21). As a conclusion, mild to moderate stable psoriasis per se seems not to affect the lipid profile. However, long-term follow-up the patients for lipid profile will provide further information.

ACKNOWLEDGEMENTS

This study was supported by grants from Erciyes University Research Foundation. The authors are indebted to Fevzive Çetinkaya for her help in statistical evaluation.

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