MICROALBUMINURIA AND CHRONIC KIDNEY DISEASE (CKD) IN PATIENTS WITH PSORIASIS

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Objectives:

Psoriasis is a chronic inflammatory dermatosis with increased risk of comorbidities including diabetes, dyslipidemia, non-alcoholic fatty liver disease and metabolic syndrome, but there are limited data on kidney disease in psoriatic patients.
In this study, we evaluated the prevalence of CKD and microalbuminuria in patients with psoriasis.

Methods:

After Ethical Committee approval, eighty-two patients received informed consent and participated in the study. All patients had blood drawn for serum creatinine (sCr) determination. Microalbuminuria (range 30-300mg/gr of urine creatinine) was detected by turbidimetric immunoassay on first morning void urine samples.
Psoriasis Area and Severity Index (PASI) scoring was used to assess the severity and extent of psoriasis.
The Student's t test and Chi-squared test were used to compare continuous and categorical data. A p value of <0.05 was considered statistically significant.

Results:

82 patients (53 men and 29 women; age range, 26-81 years; mean age 52.4 ± 13.9 years) with moderate and severe psoriasis, under conventional systemic treatment or biologics therapies, were enrolled in the study.
Demographic characteristics of the psoriatic patients are given in **Table 1**. The mean duration of psoriasis was 18,4 ± 12,6 years and the mean PASI was 13,4 ± 9,4. SCr (mean sCr 0.89 ± 0.27mg/dl) as well the estimated CKD-EPI glomerular filtration rate (mean CKD-EPI eGFR 118.6 ± 120.7 ml/min) were within their normal ranges. Mean microalbuminuria was 32,1 ± 117,2mg/gr-creat. Twelve patients (14.6%) showed microalbuminuria >30mg/gr-creat. Patients with microalbuminuria showed longer time psoriasis (27.2 ± 11.8 vs 16.5 ± 12.1 years; p = 0.005) and lower eGFR (80.1 ± 27.2 vs 124.1 ± 129.5 ml/min; p=0.007), independent of other covariates such as age, sex, BMI, diabetes and hypertension. Age, gender, BMI, prevalence of hypertension and diabetes, PASI score and RCP were not significantly different between the group with or without microalbuminuria. There was a linear correlation between microalbuminuria and PASI score (r = 0.75, p = 0.008). Patients with microalbuminuria presented higher prevalence of psoriatic arthritis (58.3% vs 27.1%; p = 0.04) **(Table2)**.

Table 1. Demographics and general characteristics of the psoriatic patients (mean ± SD)

Total number of patients	82
Sex (M/F)	53/29
Mean age (years)	54,2 ± 13,9
BMI (Kg/m2)	28,4 ± 5,6
Psoriasisi duration (years)	18,4 ± 12,6
Psoriatic arthritis	27/82 (32,9%)
Hypertension	28/82 (34,1%)
Diabetes	10 (12,2%)
PASI score	13,4 ± 9,4
PCR (mg/dl)	0,97 ± 2,0
Creatinine (mg/dl)	0,89 ± 0,27
eGFR CKD-EPI (ml/min)	118,6 ± 120,7
Microalbuminuria (mg/gr-creat)	32,1 ± 117,2

Table 2. The characteristics of the patients with/without microalbuminuria (mean ± SD) (*Student's t-test , **Chi squared test)

	Microalbuminuria < 30mg/gr-creat	Microalbuminuria > 30mg/gr-creat	*p* Value
Patients	70/82 (85,4%)	12/82 (14,6%)	—
Sex (M/F, male %)	43/27 (61,4%)	10/2 (83,3%)	0,161 **
Age (years)	53,9 ± 14,0	56,2 ± 13,6	0,294 *
BMI (Kg/m2)	28,4 ± 5,9	28,5 ± 3,7	0,911 *
Psoriasisi duration (years)	16,5 ± 12,1	27,2 ± 11,8	**0,005** *
Psoriatic arthritis	19/70 (27,1%)	8/12 (58,3%)	**0,04** **
Hypertension	22/70 (31,4%)	6/12 (50%)	0,126 **
Diabetes	8/70 (14,4%)	2/12 (20%)	0,224 **
PASI score	2,6 ± 3,2	3,2 ± 3,8	0,306 *
PCR (mg/dl)	1,03 ± 2,22	0,58 ± 0,71	0,233 *
Creatinine (mg/dl)	0,86 ± 0,23	1,12 ± 0,35	**0,013** *
eGFR CKD-EPI (ml/min)	124,2 ± 129,5	80,1 ± 27,2	**0,007** *
Microalbuminuria (mg/gr-creat)	4,5 ± 3,0	154,4 ± 259,7	**0,035** *

Conclusions:

Psoriatic patients with microalbuminuria showed longer time psoriasis and lower CKD-EPI eGFR. Microalbuminuria is not common in patients with psoriasis but its positive correlation with psoriasis severity may suggest a subclinical glomerular dysfunction in these patients. Early detection of glomerular damage, when is minimal and/or a reversible stage is extremely important.

DOI: 10.3252/pso.eu.53era.2016
ePosters supported by F. Hoffmann- La Roche Ltd.
53rd CONGRESS ERA-EDTA VIENNA AUSTRIA MAY 21-24 2016
Held jointly with Österreichische Gesellschaft für Nephrologie
PosterSessionOnline.com