MP11 COMORBID DEPRESSION OR ANXIETY IS ASSOCIATED WITH AORTIC VASCULAR INFLAMMATION AND CORONARY HEART DISEASE BEYOND TRADITIONAL CARDIOVASCULAR RISK FACTORS IN PSORIASIS

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Purpose of Study Psoriasis is a chronic inflammatory disorder associated with vascular inflammation (VI), measured by 18-fluorodeoxyglucose positron emission tomography/computed tomography (18-FDG PET/CT), and increased risk of MI. Patients with psoriasis are more likely to have comorbid depression and anxiety. Whether these comorbidities accelerate the development of CVD in psoriasis is unclear. We hypothesized that aortic VI and coronary plaque burden would be increased in patients with psoriasis who have depression and/or anxiety compared to those with psoriasis who do not.

Methods Used Patients were prospectively enrolled. Those who reported a history of depression and/or anxiety

(n=40) on survey and age- and gender-matched patients who reported no history of psychiatric illness (n=40) were selected. Target-to-Background ratio from 18FDG PET/CT was used to assess aortic VI, and coronary CT angiography scans were analyzed for coronary plaque composition.

Summary of Results Both aortic VI and coronary plaque burden were higher in psoriasis patients with comorbid depression or anxiety compared to those without (table 1). After adjustment for Framingham Risk Score, body mass index, and statin use; VI ($\beta=0.24$, $p=0.02$), total plaque burden ($\beta=0.13$, $p=0.04$), and non-calcified burden ($\beta=0.13$, $p=0.04$) were associated with comorbid depression and/or anxiety.

Conclusions Patients with psoriasis who have comorbid depression or anxiety have increased aortic VI and coronary plaque burden, suggesting that identification of psychiatric diagnoses in psoriasis may be warranted for future CV risk reduction in this high risk population.

Table 1: Characteristics of Study Groups

Parameter	Depression and/or Anxiety Diagnosis N=40	No Psychiatric Diagnosis N=40	P
Demographics and Clinical Characteristics			
Age (years)	48.9±13.0	49.1±13.0	matched
Males, N (%)	20 (50%)	20 (50%)	matched
Body Mass Index	29.8±5.3	28.0±4.5	0.07
Metabolic syndrome	15 (38%)	6 (15%)	0.07
Hypertension, N (%)	13 (33%)	9 (23%)	0.32
Type 2 Diabetes, N (%)	4 (10%)	3 (8%)	0.69
Hyperlipidemia, N (%)	20 (50%)	18 (45%)	0.65
Current tobacco use, N (%)	7 (18%)	3 (8%)	0.18
Cardiovascular Risk Profile			
Systolic BP, mm Hg	124.3±15.7	120.1±14.9	0.11
Diastolic BP, mm Hg	73.1±9.6	72±10.7	0.31
Total Cholesterol, mg/dL	184.7±38.9	178.4±38.1	0.23
LDL cholesterol, mg/dL	105.8±32.4	95.8±33.1	0.11
HDL cholesterol, mg/dL	50.5±16.1	58.9±19.7	0.98
Framingham Risk Score [median (IQR)]	4 (1-6)	2 (1-4)	0.23
Psoriasis Characteristics			
Disease duration, years [median (IQR)]	19.5 (10-32)	19.5 (6-30)	0.26
Body surface area affected, % [median (IQR)]	4.2 (2.4-17.1)	3.4 (1.7-12.5)	0.27
Vascular Inflammation by FDG-PET/CT			
Aortic Target-to-Background Ratio	1.79±0.33	1.65±0.19	0.009
Plaque Burden adjusted for luminal attenuation			
Total burden (>100), mm ² [median (IQR)]	1.10 (0.28-1.47)	0.99 (0.30-1.27)	0.01
Non-calcified burden (>100), mm ² [median (IQR)]	1.09 (0.39-1.44)	0.97 (0.77-1.26)	0.01

All values are expressed as Mean±standard deviation unless specified otherwise; p values were calculated by Student's t test or Mann-Whitney U test for symmetric and nonparametric continuous variables, respectively, and by Pearson's chi-square test for categorical variables. IQR: interquartile range.

Abstract MP11 Figure 1