Late-Onset Psoriatic Arthritis: Data from a nationwide cross-sectional study

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Background

Psoriatic Arthritis (PsA) usually presents between 30 and 60 years old.

A proportion of patients experience disease onset after 60 years old (late-onset PsA [LoPsA]).

In this nationwide study, we aimed to investigate the characteristics of patients with LoPsA regarding clinical presentation, comorbidity profile, long-term outcomes and treatment response.

Methods

Patients fulfilling the CASPAR (ClASsification criteria for Psoriatic ARthritis) criteria followed from January 1, 2022, to December 31, 2022 (time of assessment) were enrolled.

We recorded:

1. Demographics: gender, age at the time of assessment, obesity, smoking, family history of psoriasis or PsA, disease duration (the time between diagnosis and the last follow-up)
2. Clinical features at the time of diagnosis and at any time during the disease course: type of peripheral arthritis, axial disease, enthesitis, dactylitis, skin psoriasis, nail involvement, uveitis, inflammatory bowel disease, family history of psoriasis or PsA
3. Laboratory findings: HLA-B27, C-reactive protein (CRP) and erythrocyte sedimentation rate (ESR) levels at the time of diagnosis and at the time of assessment
4. Comorbidities: diabetes mellitus, coronary vascular disease, dyslipidemia, hypertension, coronary vascular disease, depression and hyperuricemia
5. Long term outcomes: history of hospitalization and serious infections over the last year from the time of assessment, arthroplasty, major adverse cardiovascular events, presence of erosions and new bone formations in hands X-rays, presence of syndesmophytes in spine X-rays, as well as the classification of difficult-to-manage (D2M), refractory PsA and PsA with minimal disease activity (MDA)
6. Treatment history: use of glucocorticoids, nonsteroidal anti-inflammatory drugs (NSAIDs), conventional synthetic disease-modifying antirheumatic drugs (csDMARDs), biologic (b) and targeted synthetic (ts) DMARDs since the PsA diagnosis.

Results

In total, 805 patients were enrolled, 130 (16%) of whom had LoPsA.

LoPsA patients:

1. were more likely to present with polyarthritis at diagnosis (OR = 2.132, CI: 1.111–4.090, p = 0.023)
2. had less often a family history of psoriasis (OR = 0.183, 95% CI: 0.053–0.637, p = 0.008)
3. developed less often enthesitis (OR = 0.503, 95% CI: 0.261–0.970, p = 0.042)
4. used less NSAIDs (OR = 0.483, 95% CI: 0.250–0.932, p = 0.027)
5. had more often comorbidities such as diabetes mellitus type 2 (OR = 3.165, 95% CI: 1.593–6.289, p = 0.001), hypertension (OR = 4.028, 95% CI: 2.034–7.974, p < 0.001) and major adverse cardiovascular events – MACEs (OR = 4.825, 95% CI: 1.463–15.910, p = 0.006)

Demographics	Whole cohort n=805	Age at disease onset< 60 n= 675	Age at disease onset≥ 60 n= 130	p-value
Female gender, n (%)	440 (54.7)	381 (56.4)	59 (45.4)	**0.021**
Age (years), mean±SD	56±12.2	53.1±10.9	71.1±6.4	**0.0001**
Smoking*, n (%)	414 (54.4) n=761	347 (54.3) n=639	67 (54.9) n=122	0.921
Disease duration (months), mean±SD	113±95.6	121.7±68.7	67.6±59.7	**0.0001**
Obesity^, n (%)	281 (38.7) n=723	238 (38.9) n=612	43 (38.7) n=111	1.000
BMI (kg/m^2), mean±SD	29.3±6 n=723	29.2±6.1 n=612	29.5±5.5 n=111	0.290
Family history of PsO, n (%)	232 (31.9) n=728	206 (33.5) n=615	26 (23) n=113	**0.028**
Family history of PsA, n (%)	54 (7.4) n=731	48 (7.8) n= 615	6 (5.3) n=113	0.437

Table-1: Demographics of patients included in the study

N: number, SD: standard deviation, *current or past, ^Body Mass Index (BMI) >30kg/m^2, BMI: body mass index, PsO: psoriasis, PsA: psoriatic arthritis, statistically significant values are denoted with bold fonts.

	Crude OR (95% CI)	p-value	Adjusted OR (95% CI)	p-value
Female gender	0.62 (0.43–0.91)	0.015	0.76 (0.39–1.48)	0.416
Family history of PsO	0.59 (0.37–0.95)	**0.029**	0.18 (0.05–0.64)	**0.008**
Family history of PsA, SpA or IBD	0.61 (0.39–0.94)	**0.024**	1.65 (0.54–5.04)	0.378
Disease duration (months)	0.99 (0.99–1.00)	**<0.001**	0.99 (0.98–0.99)	**<0.001**
Polyarthritis at diagnosis	2.00 (1.26–3.17)	**0.003**	2.13 (1.11–4.10)	**0.023**
Enthesitis (ever)	0.44 (0.30–0.66)	**<0.001**	0.50 (0.26–0.98)	**0.042**
Dactylitis (ever)	0.65 (0.42–1.00)	**0.052**	1.05 (0.53–2.09)	0.902
Diabetes	3.28 (2.12–5.07)	**<0.001**	3.17 (1.53–6.56)	**0.001**
Dyslipidemia	3.07 (2.04–4.63)	**<0.001**	1.73 (0.89–3.38)	0.105
Hypertension	3.86 (2.52–5.91)	**<0.001**	4.03 (1.90–8.55)	**<0.001**
Hyperuricemia	1.91 (1.19–3.07)	**0.008**	0.69 (0.26–1.84)	0.463
MACE	4.20 (2.25–7.84)	**<0.001**	4.83 (1.56–14.91)	**0.006**
bDMARDs (total number)	0.78 (0.67–0.91)	**0.002**	0.84 (0.63–1.13)	0.285
On TNF inhibitor therapy	0.76 (0.52–1.12)	0.162	1.41 (0.66–2.98)	0.386
On IL-17/23 inhibitor therapy	0.76 (0.44–1.32)	0.337	1.18 (0.39–3.60)	0.765
NSAIDs (ever)	0.48 (0.33–0.71)	**<0.001**	0.48 (0.25–0.92)	**0.027**

Table-4: Univariate and multivariable logistic regression analyses for factors associated with late-onset psoriatic arthritis

PsO: psoriasis, PsA: psoriatic arthritis, SpA: spondyloarthritis, IBD: inflammatory bowel disease, MACE: major adverse cardiovascular events, bDMARDs: biological disease-modifying antirheumatic drugs, TNF: tumor necrosis factor, IL-17/23: Interleukin-17 and Interleukin-23, NSAIDs: nonsteroidal anti-inflammatory drugs, statistically significant values are denoted with bold fonts

Conclusion

In conclusion, we found that patients with LoPsA presented more often with polyarthritis, had more cardiovascular comorbidities and a higher risk for MACEs. They received similar DMARD therapies with earlier onset PsA (except for fewer NSAIDs) and developed less often enthesitis. Their disease damage and outcomes did not differ from the younger group.