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Psoriatic arthritis

AB0737 AA AMYLOIDOSIS IN RHEUMATOID ARTHRITIS AND IN PSORIATIC ARTHRITIS – A POSTMORTEM CLINICOPATHOLOGIC STUDY OF 173 PATIENTS

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Background: Rheumatoid arthritis (RA) and psoriatic arthritis (PsA), like all chronic autoimmune arthritides, may be complicated by AA amyloidosis (AAa).
Objectives: The aim of this study was to determine the prevalence and extent of AAa in RA and PsA patients, furthermore appraise the extent of amyloid A deposits in various organs.
Methods: At the National Institute of Rheumatology 11860 patients died between 1968 and 1998; among them 161 patients with RA and 12 with PsA. All of them were autopsied. RA and PsA were diagnosed clinically according to the criteria of the ACR [1,2].
Amyloid deposits on different tissue structures [arteriole, small artery, medium size artery, venule, small vein, medium size vein, interstitial collagen fiber, reticulin fiber (collagen IV), basal laminas, nerve, renal glomerulus] of 6 organs [heart, lungs, liver, kidney, skin and brain] were determined histologically.
The extent of amyloid A deposition was evaluated by semi-quantitative, visual estimation on a 0 to 3 plus scale, based on the number of involved tissue structures per light microscopic field [3]. ("0": no amyloid deposits, "1": Sporadic, minimal amyloid deposits on different tissue structures, "2": less than five, "3": five or more involved tissue structures per microscopic field at objective magnification of x20)
The average prevalence and extent of amyloid A deposits of RA and PsA patients and the average prevalence and extent of amyloid A deposits in various organs were compared by Student (Welch) t-probe.
Results: The prevalence (in %) and the average extent of amyloid A deposits (absolute value) in various organs of RA and PsA patients are summarized in Table 1.

Table 1

Organs	RA-AAa Prevalence in %	PsA-AAa Prevalence in %	p<	RA-AAa Average extent	PsA-AAa Average extent	p<
Kidney	48,49	68,18	0,0611	0,99	1,41	0,0706
Heart	56,97	38,89	0,0651	0,97	0,67	0,1065
Liver	29,17	38,89	0,3014	0,60	0,67	0,3945
Lung	29,80	15,00	0,0852	0,44	0,13	**0,0002**
Skin	10,83	50,00	**0,0000**	0,18	1,00	**0,0027**
Brain	0,00	0,00	–	0,00	0,00	–
Average/Organ	29,21	35,16	0,332	0,529	0,645	0,341
Average/Patient	32,27	36,21	0,244	0,585	0,668	0,198

Conclusions: Based on the nearly same 0,585 versus 0.668, significantly not different: $p<0.198$) average amount of amyloid A deposits/patient, the immune processes (producing amyloid A deposition) of our RA and PsA patients may be similar.
The more prominent amyloid deposition in the lungs of RA patients (in contrast with PsA patients) may be associated with more frequent and pronounced pulmonary complications of RA (vasculitis, interstitial pneumonitis and fibrosis, etc.), than by PsA.
Extreme severe amyloid deposition in the skin of PsA patients may be due to local factors, namely severe systemic dystrophic changes of the skin in psoriasis. A diverse affinity of amyloid A to qualitative changed collagens cannot be ruled out in PsA in comparison with RA. In systemic sclerosis patients such change of collagens has been demonstrated [4].
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AB0738 PRECLINICAL IMPAIRMENT OF MYOCARDIAL FUNCTION AND ENDOTHELIAL VASCULAR MARKERS IN EARLY PSORIATIC ARTHRITIS: ASSOCIATION WITH VITAMIN D LEVELS AND INFLAMMATION

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Background: Patients with psoriatic arthritis (PsA) have an increased prevalence of cardiovascular risk factors such as hypertension, myocardial dysfunction, and type 2 diabetes mellitus, and cardiovascular diseases (CVD) are the leading cause of death in these patients.
Furthermore, PsA patients have a high prevalence of vitamin D (vit-D) deficiency, considered an independent predictor of cardiovascular diseases and all-cause mortality in several clinical settings.
Objectives: We aimed to evaluate left ventricular (LV) mechanics in patients diagnosed with PsA and no clinical evidence for cardiovascular disease (CVD) using a more sensitive technique, which evaluates myocardial deformation in multidimensional planes for the detection of impaired LV function. Furthermore we evaluated carotid intima media thickness (cIMT) and pulse wave velocity (PWV), circulating proangiogenic haematopoietic cells (PHCs),as markers of endothelial dysfunction. We investigated the association between vitamin D levels, inflammatory mediators, markers of endothelial and myocardial dysfunction in patients with PsA.
Methods: The study enrolled 19 PsA patients and 16 sex- -age matched healthy controls. All participants underwent conventional echocardiography and 2-dimensional speckle tracking echocardiography (STE). Global longitudinal, circumferential, and radial strain were measured. PHCs,Vitamin D levels, C-reactive protein (CRP), fibrinogen, (PWV), (cIMT) were also evaluated.
Results: PHCs count and vitamin D levels were lower in PsA patients as compared to controls, while fibrinogen, CRP, PWV and cIMT were higher in PsA patients. STE analysis showed that PsA patients had significantly lower global longitudinal strain (-16.11±2.89% and -19.15±1.9%, respectively, p=0.05) and global circumferential strain (-14.21±2.7% and -20.22±4.13%, respectively, $p<0.01$) versus control group.
No correlation was found between longitudinal and circumferential strains and disease-related risk factors.
Vitamin D levels was found to correlate with longitudinal strain, ejection fraction, PHCs, diseases activity markers, and fibrinogen levels.
Conclusions: Subclinical impaired myocardial deformation and endothelial dysfunction were common in patients with PsA even when there is no clinical evidence for CVD. Furthermore, vitamin D seems to may have a role in the endothelial homeostasis and myocardial function.
Further studies on larger sample sizes could clarify whether a supplementation of Vitamin D could modify PHCs levels inflammatory indices, myocardial function and arterial stiffness in patients affected by PsA, therefore contributing to reduce cardiovascular risk in this patients.
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