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Fibromyalgia

THU0520

ASSESSMENT OF CARDIOVASCULAR RISK IN PATIENTS WITH FIBROMYALGIA BY CAROTID-FEMORAL PULSE WAVE VELOCITY – RESULTS OF A PROSPECTIVE STUDY

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Background: Autonomic dysfunction, a basic element of fibromyalgia (FM), has been in some cases related to increased risk of cardiovascular (CV) disease. CV risk associates with aortic stiffness, which can be reliably assessed by carotid-femoral pulse wave velocity (cfPWV).

Objectives: Aims of this study were to test the hypothesis of increased cfPWV in a group of patients with FM and to examine its association with FM associated parameters and selected traditional CV risk factors.

Methods: We performed measurements of cfPWV in 99 FM patients and 102 healthy controls. The difference between cfPWV values in the two groups after controlling for possible confounding factors was evaluated through multiple regression analysis. The associations of cfPWV with FM related parameters such as pain severity on the EuroQol visual analogue scale (EQ-VAS) and FM tender points were also analysed. Finally, we explored the relationship of cfPWV with various laboratory parameters (patients' group) and traditional CV risk factors (both groups).

Results: Adjusted statistical analyses for confounding factors showed significantly higher cfPWV values in FM patients in comparison to controls ($p_{adj}=0.044$). cfPWV associated significantly with age in both the patients and the control group ($\rho=0.614$, $p<0.001$ and $\rho=0.678$, $p<0.001$ accordingly). Moreover, cfPWV correlated in the control group with systolic, diastolic and mean arterial pressure ($p<0.001$, $p=0.013$ and $p<0.001$ accordingly) as well as with Body Mass Index ($p=0.003$).

Abstract THU0520 – Table 1. Descriptive characteristics by group.

	Controls (n=102)	Patients (n=99)	Significance (p)
cfPWV (m/s)	7.50 (6.78–8.40)	8.00 (7.20–9.30)	0.004*
Age (years)	50 (38.25–56.25)	53 (46.00–59.00)	0.025*
Gender (female)	92 (90.2%)	93 (93.9%)	0.436
Nicotin (smokers)	21 (20.6%)	28 (28.6%)	0.250
Antihypertensive drugs	16 (15.2%)	35 (36.1%)	0.001*
BMI	23.74 (21.08–27.05)	26.50 (23.80–30.81)	<0.001*
MAP (mmHg)	92.33 ^{85–100}	93 (83.33–96.67)	0.586
Heart rate (/min)	66.00 (59.00–73.0)	72.00 (66.00–90.0)	0.001*
Cholesteroline (mg/dl)	-	222.8±44.4	-
HDL (mg/dl)	-	65 (54–77.5)	-
LDL (mg/dl)	-	140 (108.50–173.50)	-
Triglycerides (mg/dl)	-	105 (74.50–156.00)	-
Tender points (18/18 positive)	-	52 (52.5%)	-
CRP (mg/l)	-	1.67 (1.00–4.62)	-
ESR (mm/h)	-	13.50 ^{9–18}	-
RF (positive)	-	11 (11.1%)	-
ANA (>1:80)	-	5 (5.1%)	-
EQ-VAS (%)	-	45 (35–60)	-

* $p<0.05$

Conclusions: Our data reveal that patients with FM have higher aortic stiffness than healthy controls, even after adjusting for confounding factors of cfPWV. Therefore, FM may be associated with an increased CV risk. To our knowledge, this is the largest study to examine the gold standard assessment method of aortic stiffness in patients with FM and the first one to find increased cfPWV-values in comparison to healthy subjects.

Disclosure of Interest: None declared

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A SIMPLE INDEX BASED ON SCORES ON A MULTIDIMENSIONAL HEALTH ASSESSMENT QUESTIONNAIRE (MDHAQ) PROVIDES INFORMATION QUITE SIMILAR TO ACR CRITERIA FOR FIBROMYALGIA IN ROUTINE CARE

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Background: Fibromyalgia (FM) is common in the general population, easily identified in many patients, but subtle in some, particularly when patients meet criteria for rheumatic diseases such as rheumatoid arthritis (RA), systemic lupus erythematosus (SLE), osteoarthritis (OA), and others. American College of Rheumatology (ACR) FM criteria were reported in 1990 (Arth Rheum 33:160, 1990) and 2010 (Arth Care Res 62:600, 2010) as "preliminary diagnostic criteria," modified for patient self-report in 2011 (Ann Med 43:495, 2011), and in 2016 as the "2016 revisions to the 2010/2011 fibromyalgia diagnostic criteria" (Sem Arth Rheum 46:319, 2016). These FM criteria are not used in most routine care settings. A multidimensional health assessment questionnaire (MDHAQ) is more widely used in the USA (Arth Care Res 64:640, 2012), and is informative in RA, OA, SLE, and most rheumatic diseases (J Clin Rheumatol 19:169, 2013). MDHAQ may provide clues to primary and secondary FM in routine care, EULAR 2016, 2017

Objectives: To compare 2 indices of MDHAQ scales to the 2011 and 2016 FM criteria to identify patients with possible primary or secondary FM in routine care.

Methods: All patients with all diagnoses seen at an academic rheumatology clinic complete an MDHAQ at each visit. The modified FM criteria questionnaire was added from April-July 2017. Two MDHAQ scales were studied: MDHAQ-FM3 includes a 0–10 pain visual analogue scale (VAS), 0–48 self-report rheumatoid arthritis disease activity index (RADAI) painful joint count, and 0–60 symptom checklist; one point each is scored for pain $\geq 6/10$, RADAI $\geq 16/48$, symptom checklist $\geq 16/60$ – total=0–3. MDHAQ-FM4 adds a MDHAQ fatigue VAS; 6/10 is scored 1 (Total 0–4). Both MDHAQ indices were compared to both modified 2011 and 2016 FM criteria using kappa statistics and the proportion correctly classified ("Correct").

Results: We studied 502 patients; primary diagnoses (ICD10 in the medical record) included FM in 49, OA in 74, RA in 78, SLE in 88, others in 213. Overall, 131 patients (26.1%) met 2011 modified FM criteria and 112 (22.3%) 2010 modified FM criteria. Agreement between physician diagnosis of FM and 2016 modified criteria was 80.9% (kappa 0.44, $p<0.001$), and with 2011 modified criteria was 80.3% (kappa 0.45, $p<0.001$). Agreement of MDHAQ-FM3 score ≥ 2 with 2011 modified FM criteria was 84.3% (kappa 0.63, $p\leq 0.001$), and with 2016 FM criteria 81.7% (kappa 0.56, $p\leq 0.0001$). MDHAQ-FM4 increased the level of agreement only slightly (table 1).

Abstract THU0521 – Table 1. Prevalence and agreement of criteria and FAST3 and FAST4 versions in 502 university rheumatology clinic attendees

FM criteria status	FM2011		FM2016	
	Criteria Positive	Criteria Negative	Criteria Positive	Criteria Negative
MDHAQ-FM3 (n=502)				
Screening positive	112 (85.5%)	60 (16.2%)	96 (55.8%)	16 (4.8%)
Screening negative	19 (14.5%)	311 (83.8%)	76 (44.2%)	314 (95.1%)
	Correct 84.3% Kappa 0.63 (0.56–0.70)*		Correct 81.7% Kappa 0.56 (0.48–0.63)*	
MDHAQ-FM4 (n=464)				
Screening positive	93 (73.8%)	32 (9.5%)	81 (64.3%)	27 (7.9%)
Screening negative	33 (26.2%)	306 (90.5%)	45 (35.7%)	311 (92.0%)
	Correct 85.9% Kappa 0.64 (0.57–0.72)*		Correct 84.5% Kappa 0.59 (0.50–0.67)*	