FRA, RA and FM patients and to determine if any of the aforementioned miR could differentiate between FRA and RA.

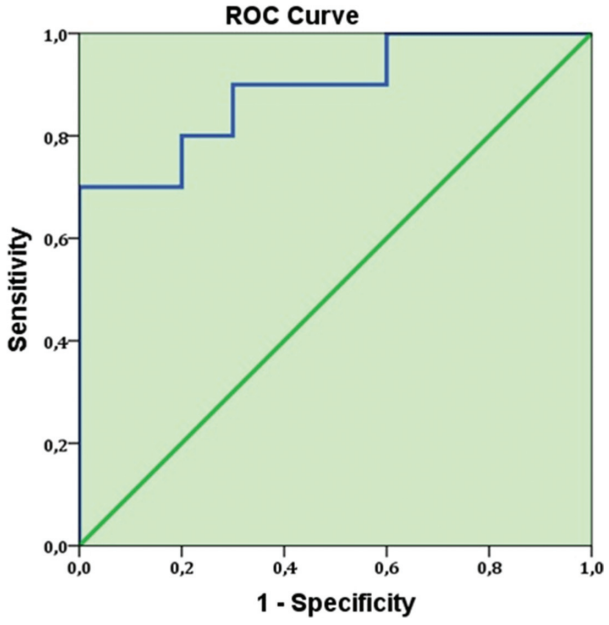
Methods: We performed a case control study on 10 FRA patients compared to 10 FM, 10 RA patients with pain of at least 50 mm on VAS, and 10 healthy controls. All patients underwent clinical and laboratory examinations. Cell lysate from peripheral blood was used for the extraction of total RNA with TriReagent; miRNA reverse transcription was performed with the miScriptII Reverse Transcription kit (Qiagen) according to manufacturer´s instructions. cDNAs obtained were further amplified by quantitative PCR (qPCR) with the miScript SYBR Green PCR kit. miRNA relative expression was quantified using the $2^{-\Delta\Delta Ct}$ method. Relative miRNA levels are expressed as fold change (Fc). Data are expressed as median (interquartile range).

Results: There were no significant differences in terms of baseline characteristics between the groups. Clinical characteristics of included patients are listed in table 1. Patients with RA had higher SJC values and higher ESR and CRP levels as compared to FRA and FM patients. However, the mean DAS28 scores of RA and FRA patients were not significantly different, due to higher TJC values and higher pain levels in the FRA group.

Expression levels for miR let-7a, miR-21–5 p3 and miR-103a-3p were similar between the groups. miR- 143 was downregulated in FRA, with a median Fc of 0.6 (IQR 0.3) and FM patients with a median Fc=0.5 (IQR 1.6) and upregulated in RA patients with a median Fc of 1.4 (IQR 0.5). miR-143 expression levels correlated negatively with TJC (r=−0.7; p<0.05) and with the Fibromyalgia Impact Questionnaire score (−0.8, p<0.01) in patients with FRA. ROC analysis showed that the AUC to identify FRA from RA patients was 0.89 (95%CI 0.7–1), p=0.03 (Fig 1). A cut-off value for miR-143 Fc of >1.04 had a sensitivity of 90% and specificity of 70% in differentiating FRA from RA.

Abstract THU0518 – Table 1. Demographic and clinical data of patients

Variable	FRA n=10	RA n=10	FM n=10	Controls n=10	p
Age (years)	54([14]	55.5 (11)	55([14]	46.5 (9)	0.1
TJC	17([12]	9 (7)	7 (11)	0	0.006
SJC	4 (10)	7 (3;9)	0	0	<0.001
Pain on VAS(mm)	75([32]	70([30]	70([25]	0	0.01
ESR(mm/h)	25([33]	54([46]	9 (7)	5 (9)	0.002
CRP(g/dl)	6 (21.4)	24.6 (41.1)	1.3 (1.2)	1.3 (4.3)	0.001
DAS28ESR	5.9 (1.9)	5.5 (2)	3.8 (1.4)	-	0.001
DAS28CRP	5.5 (2)	5.5 (2)	3.8 (0.8)	-	<0.001
HAQ	1.8 (0.9)	1.8 (0.7)	1.1 (1.4)	0	0.001
Tender point count	16([6	6 (7)	15([5	0 (1)	<0.001



Conclusions: miR-143 is downregulated in patients with FRA and may discriminate between patients with FRA and RA. Further studies are needed in order to validate these results.

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THURSDAY, 14 JUNE 2018

Epidemiology, risk factors for disease or disease progression

THU0519 PREDICTION OF PERSISTENT KNEE PAIN BY PRESSURE PAIN DETECTION THRESHOLDS: RESULTS FROM THE KNEE PAIN IN THE COMMUNITY COHORT (KPIC)

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Background: Knee pain results from a combination of nociceptive input from the joint, and processing of that input by the central nervous system. Pressure pain detection thresholds (PPTs) are lower and pain is more severe in people with greater central sensitisation.

Objectives: We hypothesised that lower PPTs predicted worse pain prognosis in people with knee pain.

Methods: KPIC participants were people aged >40 years recruited from Nottingham, UK. Participants were mailed questionnaires at baseline and 1 year. This study reports the sample of responders who attended baseline and 1 year clinical assessment, had self-reported knee pain (within the last 4 weeks) and underwent PPT. PPT was measured at the knee, anterior tibia and the sternum. Radiographic knee OA was classified using an atlas. Questionnaires measured ICOAP (constant and intermittent knee pain), painDETECT (neuropathic-like) and average knee pain severity over 4 weeks (0–10).

The presence of pain at baseline and 1 year (persistent pain), or pain severity were predicted from baseline anterior tibia PPT. Additional analyses adjusted for baseline pain score, age, sex, BMI, or for radiographic knee OA. Pain persistence (Yes/No) was analysed using t tests, odds ratios (OR) and logistic regression. Pain severity was analysed using linear regression.

Results: The sample for this study contained n=419 people at baseline, of whom n=182 people reported knee pain persistent over both time points. The mean (SD) values for those with persistent knee pain at 1 year, were age 61^{9} years, BMI 30.1 (5.8) kg m^{-2}, 59% female, and 36% fulfilled radiographic OA criteria at the index knee.

In univariate analysis, persistent knee pain was associated with a lower PPT at baseline (461 vs 424 kPa; OR (95% CI) 0.58 (0.34–0.97) p=0.020). Adjustments for age, sex and BMI removed the significance from the association (adjusted OR (95% CI) 0.64 (0.36–1.13) p=0.120).

In those with persistent pain, worse 1 year ICOAP-constant, ICOAP-intermittent, painDETECT and knee pain severity were correlated with lower baseline anterior tibia PPT (r=−0.28 to −0.24; p<0.004). After adjustment for baseline pain, 1 year ICOAP-constant pain scale was significantly predicted by baseline PPT (B (95% CI), −1.05 (-1.91 to −0.20) p=0.016). Linear regression with adjustments for age, sex and BMI also indicated that baseline PPT predicted worse ICOAP-constant pain (B (95% CI)−0.99 (-1.94 to −0.04) p=0.041).

The presence of radiographic OA at baseline predicted pain at 1 year, but was not significantly associated with PPT at baseline. Adjustment for baseline radiographic OA did not remove the association between baseline PPT and ICOAP-constant at 1 year (anterior tibia PPT −1.04 (-1.89 to −0.18) p=0.018). PPT at joint lines or sternum displayed similar patterns of association with 1 year pain as did PPT at the anterior tibia.

Conclusions: Pressure pain detection thresholds suggestive of central sensitisation at baseline were associated with knee pain prognosis at 1 year, in particular with constant knee pain. The presence of radiographic OA also predicts 1 year pain prognosis, but does not explain its prediction by PPT.

Disclosure of Interest: None declared
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THURSDAY, 14 JUNE 2018

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*
Cholesterine *(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^{8-18}	
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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THU0521 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 compared 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 ≥6/10, RADAI ≥16/48, symptom checklist ≥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≤0.001), and with 2016 FM criteria 81.7% (kappa 0.56, p≤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 FM	112 (85.5%)	60 (16.2%)	96 (55.8%)	16 (4.8%)
Screening negative FM	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 FM	93 (73.8%)	32 (9.5%)	81 (64.3%)	27 (7.9%)
Screening negative FM	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)*	