elusive, we feel that aberrant production of cytokines, or abnormal activation of intercellular signalling pathways can be involved.

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THU0441 ENDOTHELIAL DYSFUNCTION IN POLYMYALGIA RHEUMATICA

D. Birra¹, L. Santoro², S. Bosello¹, A. Nesci², G. Peluso¹, G. Ferraccioli¹, E. Gremese¹, A. Santoliquido², A. Zoli¹. ¹UOC of Rheumatology, Fondazione Policlinico Universitario A. Gemelli Catholic University of the Sacred Heart; ²Dipartimento di Medicina Interna, Università Cattolica del sacro cuore, Fondazione Policlinico Gemelli, Roma, Italy

Background: Polymyalgia Rheumatica(PMR)is an inflammatory disease that affects people over 50 years old, characterised by pain and functional limitation of shoulder and hip, acute phase reactant elevation and a dramatic response to low doses of steroids.

Atherosclerosis is a chronic inflammatory process that affects the arterial vessels of multiple districts. Endothelial dysfunction is an early event of the atherogenic process. Chronic inflammatory diseases have an increased risk of accelerated atherosclerosis and cardiovascular disease.

A study on 41 subjects with giant cell arteritis with and without PMR showed an increased mean-intimal thickness, suggesting a pro-atherogenic role of PMR. However there are no studies that evaluated endothelial dysfunction which is a more precocious marker of subclinical atherosclerosis in PMR patients

Objectives: Aim of the study was to compare endothelial function among PMR patients to a control population. Moreover, the trend of endothelial dysfunction was evaluated over time in relationship to the improvement of clinical, laboratory and instrumental parameters.

Methods: The study involved 16 treatment-naive patients with a new PMR diagnosis.

Every 3 months routine visits were performed;at each visit laboratory and clinical data and the endothelial function at the brachial artery were evaluated.

The endothelial function was evaluated at the brachial artery level after 15 min of rest; the brachial artery diameter and the basal flow was measured at baseline and after the positioning of sphygmomanometer for 5 min to induce the forearm ischemia. The flow was measured again 15 s after deflation of the sleeve and 60–90 s after the diameter of the artery reassessed to obtain flow-mediated dilatation (FMD). The FMD, which represents endothelium-dependent vasodilatation was expressed as percentage increase to the starting diameter after stimulation

Results: 16 PMR patients(mean age 73.9±5.8, 7 Female)were compared with a population of 16 healthy controls age-matched(70.8±8.1,p=ns).

The two groups differed for the values of Erythrocyte Sedimentation Rate(ESR) (61.1±28 vs 19.3±16 mm/h, p<0.001)and C-Reactive Protein (CRP)(35.6 ±28.1 mg/L vs 2.4±0.4 mg/L, p<0.001).

At the sixth month of follow-up ESR was 31.2±29.9 mm/h while CRP was 8 ±5.9 mg/L; at the twelve month of follow-up ESR was 22.7±13.6 and CRP was 9.1±8.2 mg/L

In PMR patients group 11 patients had hypertension, 5 dyslipidemia, 1 diabetes and 5 patients were smokers, while in control group 9 had hypertension, 10 dyslipidemia, 6 were smokers and no one had diabetes. Healthy subjects matched by age, sex and comorbidity were chosen as controls.

At baseline FMD of patients was lower than controls(6.6±3.4 vs 10.7±2.3, p<0.001). After 6 months of steroid therapy the difference between the two groups remained significant(6.1±2.7 vs 10.7±2.3 p=0.001), while at the twelfth month the two groups achieved comparable FMD values(8.7±3.6 vs 10.7±2.3,p=0.067). The FMD values show an inverse correlation with values of ESR(R=−0.42 p=0.019)and CRP(R=−0.56 p=0.001)at baseline.

Conclusions: Endothelial dysfunction in patients with PMR appears early during the course of the disease and is related to levels of acute phase reactant; steroid therapy gradually improves these values;only after a year of therapy comparable values are observed between patients and healthy controls.

Disclosure of Interest: None declared

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THU0442 IS BEHCET'S SYNDROME GETTING Milder? A RETROSPECTIVE ANALYSIS OF INITIAL PRESENTATION FINDINGS THROUGHOUT 4 DECADES

E. Dincses¹, Y. Ozguler¹, D. Ucar², Y. Ozyazgan², S. Ugurlu¹, G. Hatemi¹, M. Melikoglu¹, S. Yurdakul¹, H. Yazici¹, E. Seyahi¹. ¹Cerrahpasa Rheumatology; ²Cerrahpasa Ophthalmology, Istanbul, Turkey

Background: There is some evidence that incident Behcet's syndrome (BS) might be becoming less severe.¹

Objectives: We compared clinical findings at presentation of BS patients registered in a large, long standing dedicated multidisciplinary outpatient clinic at 4 time points during a 40 years period.

Methods: There were 4 groups. Group 1 included patients registered in 1979–1981, Group 2 those registered in 1990, Group 3 in 2000 and Group 4 in 2010. Only demographic and clinical findings at initial presentation were recorded.

Results: As shown in table 1, over 4 decades, male/female ratio decreases gradually. While mean age at presentation does not change, the median disease duration got shorter. Almost all clinical manifestations except genital ulcers and neurological involvement tended to decrease in frequency. This was also true when genders were separately analysed. Importantly the severity of vascular and eye disease decreased (table 1,2). The slope of vascular disease was more obvious.

Abstract THU0442 – Table 1. Initial demographic and clinical characteristics of cohorts

	Group 1 1979–81 cohort n=211	Group 2 1990 cohort n=170	Group 3 2000 cohort n=225	Group 4 2010 cohort n=270	P
Male/Female	140/71	110/60	142/83	150/120	0.069
Male/Female ratio	1.97	1.83	1.71	1.25	
Mean age at disease onset	31.5±8.3	30.9±9.0	30.7±9.3	32.3±9.6	NS
Median disease duration	2.5 [1.0–6.0]	2.0 [1.0–5.0]	1 [0.5–3]	1 [0.6–4]	0.06
Mucocutaneous inv., n (%)					
Genital ulceration	187 (88.6)	137 (80.6)	184 (81.7)	220 (81.4)	NS
Papulopustular lesion	174 (82.5)	130 (76.5)	187 (83)	185 (68.5)	<0.001
Erythema nodosum	132 (62.6)	88 (51.8)	101 (44.8)	112 (41.4)	<0.001
Ocular involvement, n (%)	107 (50.7)	107 (62.4)	97 (43.1)	129 (47.7)	0.001
Vascular involvement, n (%)	49 (23.2)	29 (17.0)	41 (18.2)	31 (11)	0.008
Large vessel involvement, n (%)	21 (42.9)	11 (38.0)	13 (31.7)	7 (22.5)	<0.001
Neurologic involvement, n (%)	7 (3.3)	6 (3.5)	5 (2.2)	10 (3.7)	NS
Arthritis, n (%)	79 (37.4)	37 (21.8)	53 (23.6)	56 (20.7)	<0.001

Abstract THU0442 – Table 2. Severity of ocular involvement at presentation

Ocular involvement	Group 1 1979–81 cohort n=107	Group 2 1990 cohort n=106	Group 3 2000 cohort n=97	Group 4 2010 cohort n=129	p
Visual acuity<0.1 in bilateral eyes, n (%)	17 (15.7)	8 (7.5)	6 (6.5)	9 (6.9)	0.03*
Visual acuity<0.1 in unilateral eye, n (%)	23 (21.3)	19 (17.9)	18 (19.7)	22 (17)	
Visual acuity>0.5 in bilateral eyes	39 (36.1)	54 (55.6)	55 (60.4)	73 (56.6)	

*Group 1 vs 4 and Group 1 vs 3

Conclusions: Our observations support the notion that incident BS might be getting milder. There might be a list of explanations for this observation. 1. It might be a biological phenomenon due to changing environmental causes. In this line the significant decrease in papulopustular lesions could be due to a more sanitary environment while the rather unchanging frequency of neurologic involvement might be its possible independence from the environment. 2. It might be that the awareness of BS is increasing and we are recognising less severe cases. 3. Another explanation might be the more effective treatment these patients received before they were referred which was not specifically sought in this survey.

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THU0443

A PROBABILITY SCORE FROM A FAST TRACK CLINIC TO AID THE MANAGEMENT OF SUSPECTED GIANT CELL ARTERITIS

F. Laskou¹, F. Coath¹, S. Mackie², S. Banerjee¹, T. Aung¹, B. Dasgupta¹.

¹Rheumatology, Southend University NHS Trust, Westcliff-On-Sea;

²Rheumatology, The Leeds Teaching hospitals NHS Trust, Leeds, UK

Background: Diagnosis of Giant Cell Arteritis(GCA) is difficult since its manifestations are protean¹. Under-diagnosis is associated with ischaemic complications whereas over diagnosis is associated with inappropriate glucocorticoids (GC)². GCA is diagnosed by different specialties, including family physicians, who would benefit from a clinical prediction score. A fast track pathway also requires clinical triage in terms of probability of disease. We evaluated all referred patients (08/16–08/17) to develop a pre-test probability score(PTBS) to support a diagnostic pathway and decision-making.

Methods: The PTBS was generated from long standing clinical experience. Information collected at initial assessment was given varying positive weightage. This included baseline demographics (age-gender), symptomatology at presentation (onset, headache and scalp tenderness, ischaemic symptoms, constitutional symptoms, polymyalgia), C-Reactive protein(CRP) and examination findings (ischaemic ophthalmic complications, temporal artery abnormalities, extra-cranial abnormalities, cranial nerve palsies). Negative weightage was given for competing diagnoses (infection, cancer, head and neck pathology, systemic rheumatological diseases). The PTBS was compared with the final diagnosis as GCA or non-GCA 6 months after the initial assessment. Analysis was performed in Stata SE, version 13.1.

Results: 122 PTBS were collected of which CRP was missing in 1 case which was excluded from the analysis. 23 had a final diagnosis of GCA at 6 months follow up. The rest consist our control group(99 patients). The area under the ROC curve for the 121 cases was 0.953 (figure 1). Using the bootstrap method gave an estimated area under the ROC curve (95% confidence interval) of 0.953 (0.911, 0.994). At the point of inflection, corresponding to a cut point of 9.5, sensitivity was 95.7%, and specificity was 86.7%; the likelihood ratio for a positive test was 7.2 and the likelihood ratio for a negative test, 0.050. At this cut point, 88.4% cases were correctly classified.

Conclusions: This single centre retrospective study suggests that PTBS is a useful standardised assessment tool for rating pre-test probability for GCA with high levels of sensitivity and specificity. PTBS may reduce variation in clinical assessment and aid decision making. A patient with low probability score(<9.5) can be managed with colour doppler ultrasound examination(US) which if

negative will exclude the disease and the clinician can reassure patient. A patient with high PTBS and positive US can safely have the diagnosis confirmed and treated with GC. With intermediate scores, conflicting PTBS and US findings, equivocal US, additional investigations including TA biopsy and/or other imaging scans may be needed. Our results need validation in a prospective study and in internal and external validation cohorts. PTBS has the potential for forming the basis for education programme for the correct and early diagnosis of GCA and limit inappropriate GC in non GCA mimics.

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THU0444

AORTIC DILATATION IN PATIENTS WITH LARGE VESSEL VASCULITIS: A LONGITUDINAL CASE CONTROL STUDY USING POSITRON EMISSION TOMOGRAPHY/COMPUTED TOMOGRAPHY

F. Crescentini¹, F. Muratore¹, L. Spaggiari², G. Pazzola¹, L. Boiardi¹, N. Pipitone¹,

C. Salvarani¹. ¹Rheumatology Unit; ²Radiology Unit, Azienda USL-IRCCS di

Reggio Emilia, Reggio Emilia, Italy

Objectives: To evaluate aortic diameter and predictors of aortic dilatation using FDG-PET/CT in a longitudinally followed cohort of patients with large vessel vasculitis (LVV) compared with controls.

Methods: All consecutive patients with LVV who underwent at least 2 PET/CT scans between January 2008 and May 2015 were included. The first and last PET/CT study of each patient was independently evaluated by a radiologist and a nuclear medicine physician. The diameter of the aorta was measured at 3 different levels: ascending, descending thoracic and infrarenal aorta. Aortic dilatation was defined as a diameter of >4 cm in the ascending, ≥4 cm in the descending thoracic and ≥3 cm in the infrarenal aorta. Aortic FDG uptake was graded at the same levels using a 0–3 semiquantitative scale and was reported as negative (score 0 or 1) or positive (score 2 and 3). Patients younger than 50 years at symptoms' onset were classified as Takayasu arteritis (TAK), while those older than 50 years as giant cell arteritis (GCA). 29 age- and sex-matched patients with lymphoma who underwent at least 2 PET/CT in the same time interval without evidence of aortic FDG uptake were selected as controls.

Results: 93 patients with LVV were included in the study. 53% of patients were newly-diagnosed; the remaining 47% had a median disease duration of 34 months. At first PET/CT, the mean (SD) diameter of descending thoracic aorta was significantly higher in LVV patients compared with controls [28.07 (4.40) vs 25.60 (3.59) mm, p=0.012]. At last PET/CT, after a median time of 31 months, patients with LVV compared with controls had higher diameter of ascending [35.41 (5.54) vs 32.97 (4.11) mm, p=0.029] and descending thoracic aorta [28.42 (4.82) vs 25.72 (3.55) mm, p=0.007] and more frequently had aortic dilatation [19% vs 3%, p=0.023]. Significant predictors of aortic dilatation were male sex [OR 7.27, p=0.001], and the diameter of ascending [OR 2.03, p<0.001], descending thoracic [OR 1.57, p<0.001] and infrarenal [OR 1.25, p=0.005] aorta at first PET/CT study. Positive aortic FDG uptake, disease activity and elevated inflammatory markers at first PET/CT were not associated with an increased risk of aortic dilatation. The results remained unchanged when the analysis were restricted to the 48 newly-diagnosed LVV patients.

According to age at symptoms onset, 56% of patients were classified as GCA and 44% as TAK. Compared with TAK, GCA patients had higher aortic diameter at all 3 levels evaluated in both first and last PET/CT study. However there were no differences in the proportion of patients with aortic dilatation (at last PET/CT 23% in GCA vs 15% in TAK, p=0.306). The results remained unchanged when the analysis were restricted to the newly-diagnosed patients.

Conclusions: Patients with large vessel vasculitis are at increased risk of aortic dilatation compared with age- and sex-matched controls. Significant predictors of aortic dilatation are male sex and aortic diameter at first imaging study. Positive aortic FDG uptake at first PET/CT is not associated with increased risk of aortic dilatation.

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