THU0301 OUTCOME OF PATIENTS WITH DIFFUSE ALVEOLAR HEMORRHAGE IN ANCA ASSOCIATED VASCULITIS

Y. Gon, K. Misaki, T. Nagamoto, H. Horiuchi, H. Yamada, R. Saito, Y. Nakamura, T. Yokota. *Endocrinology and Rheumatology, Kurashiki Central Hospital, Kurashiki, Japan*

Background: Antineutrophil cytoplasm antibody (ANCA) associated vasculitis can be life-threatening. Diffuse alveolar hemorrhage is one of the most serious complications in ANCA-associated vasculitis (AAV). Steroid pulse, cyclophosphamide (CY), and plasma exchange therapies are recommended for severe alveolar hemorrhage. However, the mortality of patients with pulmonary vasculitis remains high.
Objectives: We examined the outcome of patients with AAV complicated with diffuse alveolar hemorrhage.
Methods: We retrospectively reviewed the clinical records of patients with AAV admitted at our hospital between January 1st 2008 and September 30th 2013.We analyzed in respect to outcomes age, CRP, Hb, serum creatinine (sCr) disease activity (Birmingham vasculitis activity score: BVAS), and medical treatment method.
Results: AAV occurred in 70 patients (GPA17, MPA43, and EGPA10) and diffuse alveolar hemorrhage in 21 patients (30%). The average age was 66.8±22.6 years (MPA 71.8±18.9 years old, GPA 50.5±28.7 years old), and the sex ratio was male: female 7:10. Other severe comorbidities were progressive glomerulonephritis (4 of 6 patients died), and interstitial pneumonia (2 from 2 patients). Nine patients died and eight cases received remission maintenance therapy. The average BVAS was 21.0±5.48 in the death group, and 18.4±4.65 ($p = 0.34$) in the survival group. The was no significant difference in disease activity between the survival and death groups. There were no significant differences in CRP, sCr, Hb levels and volumes of alveolar hemorrhage in CT. There was a significant difference in average age (survival groups 51.4±28.9 years old, death groups 77.1±6.25 years old, $p = 0.02$). There was also a significant difference in five-factor score (FFS) between the two groups (survival group 1.6±0.29, death group 0.5±0.76, $p = 0.02$). All the cases in the survival group were treated with CY.
Conclusions: Our study showed that early CY treatment decreased the mortality of diffuse alveolar hemorrhage in AAV, especially in younger patients.
Disclosure of Interest: None declared
DOI: 10.1136/annrheumdis-2015-eular.4340

THU0302 PROPOSED DISEASE ACTIVITY CATEGORY THRESHOLDS FOR BEHCET'S SYNDROME ACTIVITY SCALE (BSAS) SCORES FOR A POTENTIAL "TREAT TO TARGET" APPROACH TO BEHCET'S SYNDROME

Y. Yazici, H. Bernstein, C. Swearingen. *Rheumatology, NYU Hospital for Joint Diseases, New York, United States*

Background: Behcet's Syndrome Activity Scale (BSAS), a patient reported outcome measure for Behcet's syndrome, has been validated for routine clincial care and have been shown to differentiate active treatment from placebo in clinical trials. Currently, there are no identified thresholds for disease activity levels for BSAS.
Objectives: To determine resmission, low, moderate and high disease activity level threshold scores for BSAS.
Methods: Behcet's patients seen at the NYU Behcet's Center had their demographic, clinical features and outcomes data abstracted. Confirmed Behcet's diagnosis was determined if ISG criteria were met at any time during the course of observation. Concordance correlation was estimated between the BSAS and the RAPID3; both outcomes were scaled to [0-100]. Proposed BSAS severity categories are as: Near-Remission = [0-10), Low = [10-30), Moderate=[30-60), and High = [60-100]. Weighted Kappa statistics were estimated between BSAS and RAPID3 severity categories. RAPID3 categories were based upon published[1] as well as matching the proposed BSAS severity categories.
Results: First observation data on 832 subjects were abstracted for this analysis. 504 (63%) met ISG criteria for Behcet's, 616 (74%) were female with an average age of 35 years (±13.8). Concordance between BSAS and RAPID3 was moderate (CCC =0.518). BSAS severity categories classified 7% Near-Remission, 24% Low, 48% Moderate, and 21% of the study population as High disease severity (Table). Published RAPID3 categories classified 44% of subjects as High, while matching RAPID3 categories only classified 20%. Agreement between categories was moderate for both RAPID3 classifications.

	Matching RAPID3				
BSAS	Near-Remission [0-10)	Low [10-30)	Moderate [30-60)	High [60-100]	Row Total
Near-Remission [0-10)	30 (3.9%)	19 (2.5%)	3 (0.4%)	1 (0.1%)	53 (6.9%)
Low [10-30)	52 (6.8%)	69 (9.0%)	51 (6.6%)	12 (1.6%)	184 (24.0%)
Moderate [30-60)	42 (5.5%)	95 (12.4%)	158 (20.6%)	71 (9.2%)	366 (47.7%)
High [60-100]	5 (0.7%)	14 (1.8%)	73 (9.5%)	73 (9.5%)	165 (21.5%)
Column Total	129 (16.8%)	197 (25.7%)	285 (37.1%)	157 (20.4%)	768 (100.0%)
Weighted Kappa*	0.614	95% CI: (0.559, 0.636)			

	Published RAPID3				
BSAS	Near-Remission [0-10]	Low [10-20]	Moderate [30-40]	High [40-100]	Row Total
Near-Remission [0-10)	32 (4.2%)	13 (1.7%)	6 (0.8%)	2 (0.3%)	53 (6.9%)
Low [10-30)	59 (7.7%)	38 (5.0%)	43 (5.6%)	44 (5.7%)	184 (24.0%)
Moderate [30-60)	47 (6.1%)	47 (6.1%)	105 (13.7%)	167 (21.7%)	366 (47.7%)
High [60-100]	6 (0.8%)	6 (0.8%)	27 (3.5%)	126 (16.4%)	165 (21.5%)
Column Total	144 (18.8%)	104 (13.5%)	181 (23.6%)	339 (44.1%)	768 (100.0%)
Weighted Kappa*	0.536	95% CI: (0.521, 0.648)			

*Included one-off diagonal in estimation.

Conclusions: BSAS, a patient reported outcome measure for Behcet's syndrome, correlates well with other composite indices of disease activity. Proposed cut off points for near-remission, low, moderate and high activity for BSAS may be used in clinical care for a "treat-to-target" approach to Behcet's treatment.
References:
[1] Pincus T, Swearingen CJ, Bergman M, Yazici Y. J Rheumatol 2008 Nov;35(11):2136-47.
Disclosure of Interest: Y. Yazici Grant/research support from: BMS, Celgene, Genentech, Consultant for: BMS, Celgene, H. Bernstein: None declared, C. Swearingen: None declared
DOI: 10.1136/annrheumdis-2015-eular.5806

THURSDAY, 11 JUNE 2015

Fibromyalgia and pain in rheumatic diseases

THU0303 BIOLOGICAL STRESS SYSTEMS, ADVERSE LIFE EVENTS AND THE ONSET OF CHRONIC MULTI-SITE MUSCULOSKELETAL PAIN: A SIX-YEAR COHORT STUDY

E. Generaal[1], N. Vogelzangs[1], G.J. Macfarlane[2], R. Geenen[3], E. de Geus[4], J.H. Smit[1], B.W. Penninx[1], J. Dekker[5]. *[1]Psychiatry and EMGO Institute for Health and Care Research, VU University Medical Center, Amsterdam, Netherlands; [2]Musculoskeletal Research Collaboration (Epidemiology Group), University of Aberdeen, Aberdeen, United Kingdom; [3]Department of Clinical and Health Psychology, Utrecht University, Utrecht; [4]Department of Biological Psychology and EMGO Institute for Health and Care Research; [5]Psychiatry, Rehabilitation Medicine, VU University Medical Center, Amsterdam, Netherlands*

Background: Dysregulated biological stress systems and adverse life events, both independently and in interaction, have been hypothesized to initiate chronic pain.
Objectives: We examine whether (i) function of biological stress systems, (ii) adverse life events, and (iii) their combination predict the onset of chronic multi-site musculoskeletal pain.
Methods: Subjects (n=2039) of the Netherlands Study of Depression and Anxiety, free from chronic multi-site musculoskeletal pain at baseline, were identified using the Chronic Pain Grade Questionnaire and followed-up for the onset of chronic multi-site musculoskeletal pain over 6 years. Baseline assessment of biological stress systems comprised function of the hypothalamic-pituitary-adrenal (HPA)-axis (1-h cortisol awakening response, evening levels, post-dexamethasone levels), the immune system (IMS; basal and lipopolysaccharide-stimulated inflammation) and the autonomic nervous system (ANS; heart rate, pre-ejection period, standard deviation of the normal-to-normal interval, respiratory sinus arrhythmia). The number of recent adverse life events were assessed at baseline using the List of Threatening Events Questionnaire.
Results: HPA-axis, IMS and ANS functioning was not associated with onset of chronic multi-site musculoskeletal pain, either by itself or in interaction with adverse life events. Adverse life events did predict onset of chronic multi-site musculoskeletal pain.

Table 1. Association* between adverse life events and onset of chronic multi-site musculoskeletal pain (n=2039)

	Onset of chronic pain HR (95%CI)	*P*
Number of adverse life events		
Sociodemographic adjusted[1]	1.16 (1.06–1.27)	0.001
Lifestyle & disease adjusted[2]	1.15 (1.06–1.26)	0.002
Depression & anxiety adjusted[3]	1.14 (1.04–1.24)	0.005

*Using Cox regression analyses; HR = Hazard ratio per 1 unit increase. [1]Adjusted for sex, age, years of education; [2]additionally adjusted for alcohol intake, smoking, body mass index, number of chronic diseases and physical activity; [3]additionally adjusted for lifetime diagnoses of depressive and anxiety disorders and use of antidepressants.

Conclusions: This longitudinal study[1] could not confirm that dysregulated biological stress systems increase the risk of developing chronic multi-site musculoskeletal pain. Adverse life events were a risk factor for the onset of chronic multi-site musculoskeletal pain, suggesting that psychosocial factors play a role in triggering the development of this condition.
References:
[1] Generaal E, Vogelzangs N, MacFarlane GJ, Geenen R, Smit JH, de Geus EJ, Penninx BW, and Dekker J. Biological stress systems, adverse life events and the onset of chronic multi-site musculoskeletal pain: a six-year cohort study. Submitted for publication to Annals of the Rheumatic Diseases, 2014.
Disclosure of Interest: None declared
DOI: 10.1136/annrheumdis-2015-eular.1787