FRI0280

BAFF AND APRIL GENE EXPRESSION IN PATIENTS WITH ANCA ASSOCIATED VASCULITIS

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Background: Neutrophil activation is the central step in the pathogenesis of ANCA associated vasculitis (AAV). Activated neutrophils are an important source of tumor necrosis factor (TNF) ligands involved in the B cell development and survival, namely, B cell activating factor (BAFF) and a proliferating ligand (APRIL)¹. They have been postulated to have a role in the pathogenesis of AAV but presently there is limited data^{2, 3}.

Objectives: To study the expression of BAFF and APRIL genes in patients with AAV and healthy controls and their correlation with disease activity.

Methods: This was a prospective case-control study. Gene expression of BAFF and APRIL was studied in 20 patients of AAV (10 each with active disease and in remission) and 20 healthy age and sex matched controls. Blood samples were collected after taking due consent. Following RNA extraction (QIAamp RNA blood mini kit) and cDNA synthesis ("Thermo Scientific™ RevertAid™ First Strand" cDNA Synthesis Kit), quantitative real time polymerase chain reaction (qRT-PCR) using SYBR Green I Chemistry was carried out to study relative mRNA expression of BAFF and APRIL. β actin (ACTB) a housekeeping gene was taken as a reference gene.

Results: Out of 20 AAV patients 16 were GPA and 4 MPA. Mean age of patients in active (8 GPA and 2 MPA) and remission (8 GPA and 2 MPA) group was 34.5 ± 16.1 and 39.9 ± 16.6 years respectively. The sex distribution in both groups was 1:1. Mean BVASv3, ESR and CRP in active AAV patients were 18.8 ± 8.5 , 54 ± 10.8 mm/h and 41.75 (7.07 - 402) mg/l respectively. BAFF gene expression was significantly higher in both active AAV group and remission AAV group compared to controls ($p < 0.01$, Figure 1). The BAFF expression was significantly higher in AAV patients in remission compared to active AAV patients ($p=0.008$). In contrast, the APRIL expression did not differ between AAV patients and controls ($P = 0.829$) or between active and inactive AAV patients ($p = 0.166$). There was no significant correlation of both BAFF and APRIL expression with disease activity markers (ESR, CRP, platelets and BVASv3).

Figure 1. Box and whisker plot of BAFF expression in active AAV patients, AAV in remission and controls

Fig 1- X axis shows the patients groups A-0(active), R-1(remission), C-2(control); Y axis shows the log fold change (LFC) of BAFF expression

Conclusion: BAFF gene is significantly expressed in patients with ANCA associated vasculitis. Among AAV patients there is significantly higher expression of BAFF in patients with inactive disease than active disease. There is no significant APRIL gene expression in patients with AAV.

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FRI0281

MACRO AND MICRO-VASCULAR AFFECTION IN CORRELATION TO HLA-B51 IN EGYPTIAN PATIENTSWITH BEHÇET'S DISEASE

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Background: Behçet's disease is a multisystem inflammatory disorder with unknown etiology. HLA-B51 antigen has been known as a genetic factor associated with B D(1). Vascular involvement in Behcet has been widely described to affect large & medium vessels Vascular involvement in Behcet has been widely described to affect large & medium vessels however, few studies demonstrated micro vascular affection through nailfold capillaroscopy examination (2).

Objectives: Objective was to highlights HLA role in different clinical presentation of BD, especially the vascular point of view.

Methods: 40 Egyptian Behçet's disease patients (according to the international study group of Behçet's disease, 1990), and 30 age and sex matched healthy controls where enrolled in our study. All patients were subjected to history taking and clinical examination. BDCAF, CBC, ESR, CRP, liver function and lipid profile. Genetic typing HLA B51 by PCR, carotid intima media thickness, Capillri-scopy of nail capillary fold and ankle brachial index were done to both patients and controls.

Comparison of Doppler& capillaroscopy parameters between the studied groups

			Behçet's group(N=50)	Control (N=30)	p- value
Carotid artery	Intima media thickness (mm) (mean±SD)	Rt	0.09±0.12	0.07 ±0.01	< 0.001
		Lt	0.08±0.01	0.07 ±0.01	0.009
	Peak systolic velocity (mm/s) (mean±SD)	Rt	82.49±22.82	93.46 ±19.79	0.007
		Lt	86.24±19.65	87.85 ±14.06	0.684
	End diastolic volume (mean±SD)	Rt	27.94±10.34	37.05 ±18.18	0.002
		Lt	27.29±6.35	33.81 ±13.48	0.021
	Resistivity index (mean±SD)	Rt	0.67±0.08	0.60 ±0.17	0.097
		Lt	0.69±0.07	0.62 ±0.13	0.005
	Posterior tibial artery diameter(mm) (mean±SD)	Rt	0.24±0.07	0.27 ±0.08	0.079
		Lt	0.23±0.08	0.26 ±0.08	0.083
Anterior tibial artery diameter(mm) (mean±SD)	Rt	0.25±0.10	0.28 ±0.06	0.144	
	Lt	0.24±0.10	0.27 ±0.08	0.028	
Ankle brachial index (mean±SD)	RT ATA	1.20±0.25	1.21 ±0.20	0.445	
	RT PTA	1.20±0.25	1.24 ±0.23	0.419	
	LT ATA	1.18±0.22	1.19 ±0.18	0.490	
	LT PTA	1.19±0.25	1.20 ±0.23	0.722	
Attenuated arterial wall of tibialis N (%)			10 (20)	1(2)	0.004
Capillaroscopy	Arterial limb (mean ±SD)		10.84±3.61	12.53 ±3.16	0.007
	Posterior limb (mean±SD)		16.04±6.04	17.13 ±4.47	0.050
	Capillary loop (mean±SD)		19.35±6.32	22.23 ±5.98	0.014
	Capillary length (mm) (mean±SD)		185.79±88.60	222.17 ±78.15	0.020
	Morphology N (%)	Abnormal shape	2(4%)	0	0.044
		Scanty	3(6%)	0	
		Scarring	3(6%)	0	
	Elongated	5(10%)	1(2%)		
	Crossed	7(14%)	9(18%)		
	Hemorrhage	3(6%)	6(12%)		
	No	27(54%)	34(68%)		

Results: There was no statistically significant correlation between HLA B51 and systemic manifestations or disease activity or Doppler findings nor capillary parameters and morphology. There was statistically significant relation between HLA B51 and ankle brachial index.

There was statistically significant difference between patients and controls in EDV, RI of the carotid artery, and arterial, venous limb of the capillary, also the capillary lobe and length with lower values in the patients. There was statistically significant difference between patients and controls in carotid intima media thickness with higher values in patients, inspite of the absence of significant difference in lipid.

Conclusion: HLA B51 didn't link to different clinical presentation in BD; it is related to peripheral arterial affection only. BD patients had poor arterial compliance and increased arterial stiffness, there is preclinical atherosclerosis in BD not to related to the level of lipid profile.

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FRI0282 STATINS REDUCE RELAPSE RATE IN TAKAYASU ARTERITIS

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Background: Takayasu arteritis (TAK) is a chronic inflammatory disease, mainly affecting aorta and its major branches. Despite treatment with glucocorticoid and adjunctive immunosuppressive agent, relapse is common. Considering the high relapse rate, it is important to identify additional medications that may help sustain remission. Statins, as having anti-inflammatory and immunomodulatory effects, may be one such possibility. **Objectives:** To investigate the effect of statins on relapse of Takayasu arteritis (TAK), which frequently occurs after achievement of remission.

Methods: We conducted a retrospective study on TAK patients with active disease, diagnosed between 2012 and 2017. Relapse was defined as recurrence of active disease after achieving remission. Demographic and clinical parameters of patients who experienced relapse were compared to those who did not. To identify factors associated with relapse, multivariate Cox regression analysis with stepwise backward elimination was performed. Inverse probability of treatment weighting (IPTW)-adjusted analysis was used to evaluate the influence of statins on relapse.

Table. Multivariate Cox proportional hazard regression analysis estimating risk of relapse

	Adjusted hazard ratio	95% confidence interval	P value
Age	0.974	0.942–1.008	0.130
Hypertension	0.776	0.309–1.951	0.590
Carotidynia	2.348	1.002–5.505	0.050
LDL-cholesterol	1.007	0.986–1.028	0.510
Statin use	0.260	0.120–0.563	0.001

Abbreviation: LDL; low density lipoprotein

Results: Of the total 74 TAK patients, 40 (54.1%) patients received statins, whereas 34 (45.9%) patients did not. Relapse was observed in 36 (48.6%) patients of the total 74 TAK patients. Compared with patients who did not experience relapse, patients who experienced relapse were younger (44.5±13.5 years vs 34.1±12.6 years, p=0.001), had lower prevalence of hypertension (63.2% vs 38.9%, p=0.037), more commonly had carotidynia (7.9% vs 27.8%, p=0.025), had higher LDL-cholesterol (84.8±18.8 mg/dl vs 100.5±26.1 mg/dl, p=0.010), and were less commonly taking statins (71.1% vs 36.1%, p=0.003). These variables were included in multivariate Cox regression analysis. The use of statins was significantly associated with lower risk of relapse (adjusted hazard ratio 0.260, 95% confidence interval 0.120–0.563, p=0.001). Furthermore, IPTW-adjusted

analysis confirmed that statin use was associated with a lower risk of relapse (IPTW-adjusted hazard ratio 0.153, 95% confidence interval 0.038–0.616, p=0.008).

Conclusion: In TAK, statins can be beneficial in reducing relapse rate after achieving remission.

Covariates: age (continuous), hypertension (yes/no), carotidynia (yes/no), LDL-cholesterol (continuous), and statin use (yes/no)

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FRI0283 PRESENTATION AND MANAGEMENT OF GIANT CELL ARTERITIS IN A REAL-WORLD SETTING (ARTEMIS STUDY)

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Background: We have little real-world data in France on the natural history and management of patients with GCA.

Objectives: The objective of this observational study, named ARTEMIS, was to describe the characteristics and management of patients with GCA in real-life settings in France.

Methods: This was a cross-sectional, non-interventional, multicentre, single-visit survey, conducted among hospital-based physicians specialized in internal medicine or rheumatology. Investigators enrolled consecutive patients ≥ 50 years old seen for GCA and currently under treatment. Information on medical practices, such as patient characteristics and diagnostic journey, diagnostic methods and specific GCA treatments, were collected on an eCRF. GCA activity was assessed on a 100-mm VAS completed by the patients (PtGA) and physicians (PGA). GCA was considered active for VAS scores ≥ 10 mm. Newly diagnosed GCA was defined as diagnosis (Dg)-to-visit interval < 6 weeks. Onset of symptoms-to-Dg interval was classified as "short" (< 1 month), "intermediate" (1–3 months) and "long" (> 3 months). Descriptive statistics were used for quantitative and qualitative variables.

Results: Over the 3-month inclusion period (August–November 2018), 306 patients were recruited (females: 67.3%, age at Dg ≥ 70 years: 72.5%); 260 (85.0%) and 46 (15.0%) were followed by internists or rheumatologists, respectively. Overall, 39 (12.7%) had newly diagnosed GCA, 267 (87.3%) had a GCA duration ≥ 6 weeks (mean follow-up 24.0±27.0 months). Original referral of patients to specialized centres was from GPs (55.9%), ophthalmologists (10.1%), neurologists (6.9%), emergency physicians (5.6%), internists (4.2%) and rheumatologists (4.9%). Mean time to Dg was 3.3±6.9 months, with an "intermediate" Dg interval for 57.5% of patients. The most common prior medical histories were hypertension (45.8%), psychiatric disorders (10.1%), dyslipidemia (11.8%), diabetes (9.5%) and osteoporosis (5.9%); during follow-up psychiatric disorders, diabetes and osteoporosis were more often reported: 12.1%, 14.7% and 8.5% of patients respectively. Initial GCA presentations included cranial symptoms (89.5% of patients), constitutional symptoms (73.9%), polymyalgia rheumatica (48.4%), and other extra-cranial manifestations (34.0%). Initial mean ESR and CRP level were 73.0±30.7 mm/hr and 87.3±68.3 mg/l. Temporal artery biopsy, high-resolution temporal artery Doppler ultrasonography, ¹⁸FDG-PET and aortic angio-CT were performed for 84.7%, 31.2%, 26.4% and 29.7% of patients, respectively, and contributed to GCA Dg for 67.1%, 52.7%, 70.3% and 36.8%. At study visit, PtGA was 28.1±26.4 and PGA was 13.1±21.4. Ongoing medications included glucocorticoids (GC) for 273 (89.2%) patients (mean dose: 14.9±16.7 mg/d), methotrexate for 35 (11.4%) and tocilizumab for 44 (14.4%). In total, 122 (39.9%) patients had ≥ 1 relapse (mean number of relapses: 1.7±1.0) after a mean time to a first relapse of 13.3±12.8 months. Total cumulative oral GC dose was 5179±4987 mg. GCA-related complications occurred in 48 (15.7%) pts with eye disorders in 15 (5.2%).

Conclusion: This observational, cross-sectional study of a large number of patients provides insight into current medical practices for GCA in France. Despite extensive use of large-vessel imaging, the proportion of patients diagnosed with non-cranial GCA is small (10%). The substantial proportion of patients with relapsing disease results in high cumulative doses of glucocorticoids. The number of patients with tocilizumab treatment was slightly greater than that with methotrexate treatment.

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