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POS1353

SERUM PROTEOMICS REVEALS INSULIN-LIKE GROWTH FACTOR BINDING PROTEINS-1 AS BIOMARKERS FOR IDIOPATHIC MULTICENTRIC CASTLEMAN'S DISEASE

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Background: Castleman's disease (CD) is a lymphoproliferative disorder¹ and presents as two distinct clinical entities: the localized form, unicentric CD (UCD) and the multicentric form, multicentric CD (MCD)². MCD without human herpesvirus-8 (HHV-8) infection is defined idiopathic MCD (iMCD)³ and most MCDs in Japan are iMCDs. TAFRO syndrome is a group of disease that present with T: thrombocytopenia, A: anasarca, F: fever, R: reticulon fibrosis/renal dysfunction, O: organomegaly⁴. iMCD-TAFRO is present in the TAFRO syndrome and it is thought that pathology of lymph node biopsy shows an MCD-like appearance, and some clinical features overlap with MCD⁵. That do not belong to any of the above categories is classified as iMCD-not otherwise specified (iMCD-NOS). No biomarkers stratifying iMCD-NOS and iMCD-TAFRO have been identified, and no biomarkers defining treatment response have been identified for iMCD.

Objectives: We will identify biomarkers that discriminate iMCD-NOS and iMCD-TAFRO or predict the treatment responsiveness.

Methods: We performed a comprehensive analysis of serum proteins using the L-Series Human Antibody Array L-507 on the 4 iMCD-NOS and 2 iMCD-TAFRO patients from which pre- and post-tocilizumab treatment samples were obtained. An analysis by L-507 identified insulin-like growth factor binding proteins-1 (IGFBP-1) as a protein with a high rate of reduction post treatment. Sera from 28 healthy controls, 8 patients with iMCD-NOS, and 6 patients with iMCD-TAFRO were used to validate IGFBP-1 by ELISA. The mean ages of healthy controls, iMCD-NOS, and iMCD-TAFRO used in the validation ELISA were 50, 56, and 47 years, respectively, with no significant differences among the groups. The ratio of male to female was almost 1:1.

Results: The 4 patients who responded well to treatment with tocilizumab all had a high rate of IGFBP-1 reduction by L-507 serum protein arrays. In ELISA, serum IGFBP-1 was significantly higher ($p=0.0016$) before the introduction of treatment in iMCD patients than healthy controls. In addition, serum IGFBP-1 level of iMCD-TAFRO was significantly higher than iMCD-NOS ($p=0.024$). Furthermore, post-treatment serum IGFBP-1 was decreased in many cases.

Conclusion: Serum IGFBP-1 may play a particularly important role in the pathogenesis of iMCD-TAFRO and may be useful in discriminating between iMCD-NOS and iMCD-TAFRO. In the future, we will accumulate more cases, compare it with other inflammatory diseases, and examine the difference in response to treatment.

REFERENCES:

- CASTLEMAN, et al. 1954. CASE records of the Massachusetts General Hospital Weekly Clinicopathological Exercises: Case 40011. N Engl J Med, 250, 26-30.
- WATERSTON, et al. 2004. Fifty years of multicentric Castleman's disease. Acta Oncol, 43, 698-704.
- FAJGENBAUM D, et al. 2014. HHV-8-negative, idiopathic multicentric castelman disease (iMCD): A description of clinical features and therapeutic options through a systematic literature review. Blood (ASH Annual Meeting Abstracts), 124, 4861.
- TAKAI K, et al. 2010. Thrombocytopenia with mild bone marrow fibrosis accompanied by fever, pleural effusion, ascites and hepatosplenomegaly [in Japanese]. Rinsho Ketsueki, 51, 320-325.
- IWAKI N, et al. 2016. Clinicopathologic analysis of TAFRO syndrome demonstrates a distinct subtype of HHV-8-negative multicentric Castleman disease. Am J Hematol, 91, 220-226.

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POS1354

GENDER DIFFERENCES IN CLINICAL FEATURES AND BURDEN IN PATIENTS WITH FAMILIAL MEDITERRANEAN FEVER: PRELIMINARY REPORT

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Background: Familial Mediterranean fever (FMF) is the most common hereditary auto-inflammatory disease, which is more common in groups in the Mediterranean basin, characterized by recurrent attacks of febrile peritonitis, pleuritis and arthritis.

Objectives: The aim of this study is to investigate the gender differences in clinical and demographic features in patients with familial Mediterranean fever (FMF). **Methods:** Patients with FMF diagnosed according to Tel-Hashomer criteria were included in this multi-center study. Data about age, sex, disease duration, symptom duration, age at diagnosis, comorbid diseases and medications were noted. All patients were screened with Hospital Anxiety and Depression Scale (HADS), Health Assessment Questionnaires (HAQ), Short Form 36 (SF-36). The severity of FMF was assessed by the PRASS scoring system.

Results: Of the 286 patients, 199 (69.6%) were female with the mean age 36,2(SD:12.32) years and 87 (30.4%) were male with the mean age 32,9(SD:12.6) years ($p=0,017$). Age of diagnosis in male patients was lower than in females ($p=0,008$). The most common genetic mutation in both genders was M694V gene mutation. Homozygous M694V positivity was higher in males (31,79% vs 17,4%). More than 90% of patients were receiving colchicine, 10 (3,5%) patients were receiving anakinra and 5 (1,75%) patients were receiving canakinumab. Among the patients regularly taking colchicine, 86.2% were females and 86% were males ($p=0,981$). There were no differences between male and females in terms of clinical findings, frequency and duration of attacks, presence of colchicine resistance, and the presence of amyloidosis ($p>0,05$). ESR was detected higher in female group ($p=0,011$). Headache ($p=0,001$), migraine ($p=0,031$), and concomitant diseases ($p=0,017$) were also more common in females than males. Anxiety and depression scores were higher in females ($p<0,05$). The PRASS activity scores were similar between genders ($p>0,05$). All parameters of SF-36 were higher in male patients, while HAQ score was higher in females ($p<0,05$).

Conclusion: Although clinical findings, disease severity and treatment compliance are similar in both genders, males are diagnosed with FMF earlier than females, but findings such as anxiety, depression, migraine, and headache are more common in female patients.

REFERENCES:

- Doğan HO, Koca Y, Erden G, Karaaslan Y, Bozat H. Evaluating MEFV mutation frequency in Turkish familial Mediterranean fever suspected patients and gender correlation: a retrospective study. Mol Biol Rep. 2012 May;39(5):6193-6.

Table 1. Demographic and clinical features between female and male FMF patients.

	Female (n:199)	Male (n:87)	P
Demographic features, mean (SD)			
Age	36,2 (12.32)	32,9 (12,6)	0,017
BMI	26,87(5,73)	25,79(5,28)	0,177
Educational level, years	8,77(4,36)	12,08(3,23)	0,000
Age at diagnosis	28 (13,31)	23,7 (13,42)	0,008
Age at onset of disease	19,2 (12,6)	17 (10,6)	0,265
Clinical features, n (%)			
Fever	166 (83,4)	77 (88,5)	0,268
Abdominal pain	180 (90,5)	78 (89,7)	0,835
Chest pain	62 (31,2)	20 (23)	0,160
Erysipelas like erythema	12 (6)	4 (4)	0,628
Arthritis	46 (23,1)	24 (24)	0,419
Arthralgia	102 (51,3)	42 (48,3)	0,643
Myalgia	101 (50,8)	47 (54)	0,611
MEFV mutations, n (%)			
M694V/M694V	24 (12,3)	19 (22)	0,047
M694V heterozygous	38 (19,5)	14 (16,3)	0,523
M694V/any	25 (12,8)	15 (17,4)	0,307
PRASS disease severity, n (%)			
Mild	99(49,7)	46(52,9)	0,813
Moderate	88(44,2)	35(40,2)	
Severe	12(6)	6(6,9)	
ESR, mm/hour, mean (SD)	23,77(16,27)	18,25(18,41)	0,011
HAQ, mean (SD)	0,49 (0,63)	0,16 (0,43)	0,000
HAD, mean (SD)			
Anxiety	8,4 (4,4)	6,7 (3,44)	0,003
Depression	7,1 (4,27)	5,7 (3,81)	0,006
SF-36, mean (SD)			
Physical functioning	63,56 (23,81)	79,93 (19,32)	0,000
Physical role limitation	45,78 (40,95)	61,41 (39,14)	0,003
Emotional role limitation	47,36 (42,04)	66,20 (40,69)	0,020
Energy/fatigue	42,50 (20,64)	53,64 (19,82)	0,000
Emotional well-being	51,61 (18,47)	58,74 (18,30)	0,003
Social functioning	57,06 (23,09)	70,52 (23,82)	0,000
Pain	51,66 (24,05)	65,72 (24,51)	0,000
General health	39,53 (20,01)	52,46 (23,83)	0,000