Abstract AB1128 – Figure 1. Serum Versican levels between FMF and Control groups

Conclusions: Serum versican level was statistically significant lower in FMF group than in control. On the other hand, there was no statistically significant correlation between versican levels and other parameters in FMF patients with attack-free period. Clinical trials including FMF patients with attack-period, attack-free period and amyloidosis would be designed in order to investigate the possible role of versican.

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AB1129 EPIDEMIOLOGICAL AND CLINICAL PROFILE OF PATIENTS WITH PARANEOPLASTIC RHEUMATOLOGIC SYNDROMES IN A SPANISH TERTIARY HOSPITAL

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Background: Paraneoplastic rheumatic syndromes (PRS) are defined as rheumatic symptoms caused by a malignancy, but which are not caused directly by the tumour or metastasis. PRS are characterised by a close temporal relationship with an underlying malignancy and fast regression of the symptoms after the treatment of the primary tumour.

Objectives: To describe the epidemiological and clinical profile of patients diagnosed with PRS in a Spanish tertiary hospital.

Methods: A retrospective observational study was performed, which included all patients who were diagnosed of PRS in our centre during the period 1985–2017. The demographic, clinical and outcome data were obtained from their medical records.

Results: During the study period 48 patients with suspected paraneoplastic syndrome were identified, but diagnosis was confirmed in 14 of them, 7 women (50%), with a mean age at diagnosis of 69.8±14.5 years. 42.9% of patients were smokers, 14.3% reported alcohol consumption, 35.7% and 7.1% had personal and family history of neoplasia, respectively; no patient reported personal or family history of autoimmune disease. The comparison between patients with and without PRS is shown in the table, but no significant differences were identified. The most common neoplasm was breast cancer (28.6%). 21.4% of the cases of PRS appeared as a consequence of a tumour recurrence. In 42.9% of patients the diagnostic of the tumour was concomitant to PRS, while the remaining 57.1% SPR was previous. The most frequent paraneoplastic syndrome was polymyalgia rheumatica (42.9%), followed by dermatomyositis (28.6%) and paraneoplastic polyarthritis (28.6%). The most common musculoskeletal manifestation was shoulder girdle pain and stiffness (35.7%) followed by polyarthritis and proximal

muscular weakness (28.5%). 85.7% of the patients had high erythrocyte sedimentation rate and C-reactive protein levels with a mean value of 60.2±39.4 mm/h and 77.6±9.5 mg/L, respectively. Antinuclear antibodies were positive in 7 patients (50%), while rheumatoid factor, anti-CCP and anti-RNP were positive in 1 patient each (7.1%). The response of PRS to the treatment of the tumour was available in 9 patients, of which 6 (66.7%) presented remission of the PRS. Regarding mortality, 5 patients (35.7%) died due to complications associated with the primary tumour.

Abstract AB1129 – Table 1

	PRS (n=14)	NO PRS (n=34)	P-value
Age (years)	69.78±14.57	73.23±10.81	0534
Sex (Male)	7 (50%)	14 (41,17%)	0575
Personal history of malignant neoplasm	5 (35,71%)	16 (47,05%)	0471
Personal history of autoimmune disease	0 (0%)	4 (11,76%)	0180
Family history of malignant neoplasm	1 (7,14%)	0 (0%)	0115
Family history of autoimmune disease	0 (0%)	1 (2,94%)	0115
Smoking	6 (42,86%)	13 (38,24%)	0766
Alcoholism	2 (14,29%)	4 (11,76%)	0810

Comparison of the demographic characteristics of patients with and without a diagnosis of paraneoplastic rheumatic syndrome.

Conclusions: Polymyalgia rheumatica was the most frequent PRS in our study, in contrast to several published series where other PRS are more common such as hypertrophic osteoarthropathy, polyarthritis and dermatomyositis/polymyositis. The laboratory data and response to treatment of the tumour were similar to those reported in the literature. The mortality in our series was high, but in none of the cases was related directly to PRS.

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AB1130 LATE ONSET TUMOUR NECROSIS FACTOR RECEPTOR (TNFR)–ASSOCIATED PERIODIC SYNDROME (TRAPS) CAUSED BY SOMATIC TNFRSF1 MOSAICISM

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Background: Tumour necrosis factor receptor (TNFR)–associated periodic syndrome (TRAPS) is an autosomal-dominant disease caused by gain-of-function mutations in the TNFRSF1A gene, which encodes the 55-kd TNFR type I (TNFRI) protein. Mosaicism has been identified in a single patient. A 60 year old male presented with a 6 year history of intermittent fever as high as 103.5, lasting 3–4 weeks with associated peritoneal symptoms, arthralgias, myalgias, lymphadenopathy, bilateral episcleritis, erythematous rash in his torso. Prednisone up to 60 mg daily and colchicine was ineffective where he responded fully to canakinumab at a dose of 150 mg every 4 weeks.

Objectives: To identify the extent of mosaicism in a patient with adult onset TRAPS phenotype.

Methods: DNA was extracted from the patient's whole blood, saliva and hair root. The TNFRSF1A gene was analysed by Sanger sequencing in all tissues, whole blood and fractionated cell subsets. *In silico* molecular modelling was performed to predict the structural and functional consequences of the tumour necrosis factor receptor (TNFR) type I protein mutation.

Results: Sanger sequencing revealed differential tissue and hematopoietic cell presence of a missense mutation at c.265 T>C p.Phe89Leu (F89L) Chr12 (GRCh37):g.6442960A>G ex3 rs104895245. The mutant allele was present in whole blood and buccal mucosa and absent in hair root, supporting the presence of somatic TNFRSF1A mosaicism. Additionally, quantitative analysis revealed allele frequency of 50% in B cells, 30% in NK cells and 30% in neutrophils. The mutation was absent in T cells and monocytes. *In silico* prediction modelling with SIFT and PolyPhen2 suggested that this mutation led to numerous structural rearrangements which resulted in changes in the protein surface profile.

Abstract AB1130 – Figure 1

Conclusions: This is the second reported case of TNFRSF1A mosaicism in a patient with TRAPS, which was attributable to a *de novo* mosaic missense mutation in the TNFRSF1A gene. (c.265 T>C) p.Phe89Leu (F89L). Our results point to a late-onset mutational event at the level of a multipotent hematopoietic stem cell.

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AB1131 IL-33, A NOVEL CYTOKINE FOR FMF? HOW IS IT RELATED WITH DISEASE PATHOGENESIS?

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Background: Familial Mediterranean Fever (FMF) is an autosomal recessive inherited autoinflammatory disease characterised with unpredictable attacks of fever, polyserositis and arthritis. The disease is associated with MEFV gene mutation causing dysfunction of pyrin protein. This dysfunction of pyrin is related with aberrant production of proinflammatory cytokines, especially IL-1 β and IL-18. IL-33 is a novel proinflammatory cytokine that belongs to interleukin (IL)–1 superfamily. When released from epithelial, endothelial and fibroblasts, it binds to its specific receptor ST2 and induces the production of inflammatory cytokines. IL-33/ST2 pathway has been recently shown to be related with several rheumatological diseases such as rheumatoid arthritis, systemic lupus erythematosus.

Objectives: As it is well known that inhibition of IL-1 pathway is the cornerstone of FMF treatment, the aim of this study was to evaluate the role of IL-33, a member of IL-1 family, in the pathogenesis of FMF.

Methods: Seventy-six FMF patients and 30 sex-age matched healthy controls were enrolled in the study.

Results: The demographic data of FMF patients and healthy controls are demonstrated in Table 1. Serum IL-33 and its soluble receptor ST2 (sST2) were analysed with ELISA. There was no statistically significant difference between IL-33 and sST2 levels in FMF and control groups ($p=0.687$ and $p=0.054$, respectively) (table 1). FMF patients were grouped as active and inactive disease according to Autoinflammatory Disease Activity Index (AIDAI) for the past 31 days and ≥ 9 was accepted as active disease. The serum IL-33 and sST2 levels were similar in both active and inactive groups ($p=0.362$ and $p=0.706$, respectively). In active group, C-reactive protein and serum-amyloid A levels were significantly higher than inactive group. ($p=0.01$, $p=0.015$ respectively) (table 2).

Abstract AB1131 – Table 1. The table that shows the characteristics of FMF patients and healthy controls

	FMF (n=76)	Control (n=30)	p
Age (years)	33.8 $\pm$ 11.8	37.0 $\pm$ 8.4	0.123
Female, n (%)	56 (73.7)	18 (60)	0.167
IL-33	3.88 $\pm$ 2.04	3.71 $\pm$ 1.36	0.687
sST2	2756.8 $\pm$ 411.0	2828.0 $\pm$ 118.8	0.054

Abstract AB1131 – Table 2. The table that shows the characteristics of active and inactive FMF patients

	Active ²⁴	Inactive (52)	p
Age (years)	31.8 $\pm$ 10.8	34.8 $\pm$ 12.2	0.310
Female, n (%)	17 (70.8)	39(75)	0.701
IL-33	4.26 $\pm$ 2.73	3.70 $\pm$ 1.64	0.362
sST2	2730.4 $\pm$ 426.8	2769.0 $\pm$ 407.1	0.706
Attackno/year (IQR)	4 (5)	2 (4)	<0.001
AIDAI score(IQR)	16 (16)	0 (3)	<0.001
ESR	17.7 $\pm$ 12.1	12.8 $\pm$ 8.1	0.108
CRP	22.5 $\pm$ 31.3	4.4 $\pm$ 7.7	0.01
Fibrinogen	3.5 $\pm$ 1.3	3.6 $\pm$ 3.3	0.896
SAA	29.9 $\pm$ 41.7	5.4 $\pm$ 8.2	0.015

Conclusions: In this study, significant differences were not found in serum IL-33 and sST2 levels neither in FMF vs control nor active vs inactive FMF groups. This may be because of, unlike the other members of IL-1 superfamily, IL-33 mainly induces T helper (Th)2 immune responses. On the other hand, the pathogenesis of FMF is mainly dependent on Th17 cell activation and Th1 cell differentiation via IL-18 induction. As a result, it can be concluded that even if IL-33 is a component of IL-1 family, it has no role in the pathogenesis of FMF. As far as we know, this is the first study in the literature. Therefore, further studies with larger sample size are needed to confirm this result.

Disclosure of Interest: None declared

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AB1132 PANNICULITIS IN RHEUMATOLOGY PRACTICE: SPECIFIC FEATURES OF CLINICAL COURSE AND OUTCOMES

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Background: Panniculitis (Pn) is a heterogenic group of inflammatory diseases with predominant involvement of subcutaneous adipose tissue and may occasionally be seen in clinical practice by many specialists. Although, fever, skin symptoms and joints involvement alongside with pronounced rise of acute phase inflammation reactants are the reasons for referral to a rheumatologist. At the same time absence of clear diagnostic algorithm would result in delayed diagnosis and, consequently, inadequate treatment.

Objectives: To assess clinical course and clinical outcomes of panniculitis in current rheumatology practice.

Methods: The study included 209 pts on the record at VA Nasonova Research Institute of Rheumatology during 2009–2016 yy. (185 females and 24 males, aged 17–80 years) with referral diagnosis “Erythema nodosum. Non-differentiated panniculitis» and disease duration from 1 week to 25 years. Patients' assessment included general clinical examination, serological and immunological tests, histological and immunohistochemical analyses, chest CT scan, Doppler ultrasonography of the lower extremity veins, and tuberculin skin test. Outcomes were evaluated in 1–6 years.

Results: Secondary to underlying non- rheumatic condition Pn was identified in 23 pts. The most prevalent Pn types in remaining 186 cases were: erythema nodosum (EN) (121pts), lipodermatosclerosis (LDS)³⁸ and Weber-Christian disease (WCD).¹⁸ Symmetrical distribution of nodules over upper and lower extremities (ULE) was characteristic for 93% of all EN cases. In LDS populations 68% cases had increased mean body mass index (BMI), 79% – chronic venous insufficiency (CVI), 60% – asymmetric distribution of lesions, mostly over medial leg (92%). In WCD patients the nodules were covering all ULE surfaces, and in 14 nodules were found on the trunk. The three Pn types had certain differences in the clinical course: high clinical and lab activity was documented in *Löfgren syndrome* and *WCD* pts. Asymmetric distribution of nodules on the legs was characteristic for LDS, nodules on the trunk were specific for WCD. The highest recurrence rate was documented in WCD pts (39,7 per 100 patient-years), the lowest—in *Löfgren*