Results: Bilateral CFV thickness was significantly higher in BD compared to all comparative groups ($p < 0.001$ for all) (Table 1, Figure 2). No correlations were present between CFV thickness and both BSAS and CRP levels ($p > 0.05$ for all). In only 2 (8%) patients with venous insufficiency and 2 (10%) patients with systemic vasculitis, bilateral CVF thickness was higher than the cut-off values. Interestingly, APS was the only control group with positivity, in 12 (41%) patients with APS, bilateral CFV thickness was higher than the cut-offs. There was no difference between male vs female BD patients regarding CFV thickness (right CFV: 0.78 mm vs 0.79 mm , $p = 0.96$, left CFV: 0.78 mm vs 0.8 mm , $p = 0.80$). Although a higher CVF thickness tendency was observed in VBD, no statistically significant difference was present between BD patients with ($n = 40$) and without ($n = 58$) vascular involvement (right CFV: $0.82 \pm 0.3 \text{ mm}$ vs $0.75 \pm 0.3 \text{ mm}$, $p = 0.122$, left CFV: $0.84 \pm 0.3 \text{ mm}$ vs $0.76 \pm 0.3 \text{ mm}$, $p = 0.165$).

Table 1. Venous Wall Measurements of Lower Extremity in Study Groups

	Behcet's Disease (n=110)	Healthy Controls (n=47)	Systemic Vasculitis (n=21)	Venous Insufficiency (n=28)	Anti-phospholipid Syndrome with DVT (n=29)
Age (years)	33.5 ± 6	30.1 ± 5	33.3 ± 7	36.7 ± 6	38.3 ± 9
Gender, male n (%)	89 (81)	40 (85)	12 (57)	13 (46)	9 (31)
Body Mass Index, kg/m ²	25.5 ± 4	24 ± 2	23.8 ± 3.5	27.7 ± 4	27.2 ± 7
Right CFV Thickness (mm)	0.79 ± 0.3	0.34 ± 0.1	0.34 ± 0.15	0.38 ± 0.1	0.48 ± 0.15
Left CFV Thickness (mm)	0.78 ± 0.3	0.3 ± 0.1	0.36 ± 0.14	0.38 ± 0.2	0.48 ± 0.15

CFV: Common Femoral vein, DVT: Deep Venous Thrombosis

Figure 2. Distribution of common femoral vein thickness in study groups

Conclusion: Increased CFV thickness is present in BD patients, independent of vascular involvement. We also found that CFV thickness is a distinctive feature of BD, rarely present in other inflammatory/vascular diseases such as ankylosing spondylitis (previously shown), systemic vasculitides and venous insufficiency (except APS with DVT). CFV thicknesses are easily and reliably measured by Doppler US. We, therefore, suggest that assessment of CFV can be a diagnostic tool for BD with a good sensitivity and specificity to differentiate BD from similar disorders.

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FRI0474 IMMUNE CHECKPOINT INHIBITOR-INDUCED MUSCULOSKELETAL MANIFESTATIONS. A SYSTEMATIC REVIEW

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Background: Immune checkpoint inhibitors (ICI) are potent anti-cancer drugs that associate with a wide range of immune related adverse events (Ir-AE), including musculoskeletal manifestations.

Objectives: We performed a systematic literature review of ICI-induced musculoskeletal manifestations aiming at exploring the following: 1) the prevalence of these manifestations and the time from first ICI administration to symptom onset, 2) the main clinical phenotypes and the type of treatment required to

control symptoms (steroids/DMARDs), 3) the type of ICI (CTLA-4 vs PD-1/PD-L1 inhibitors) mostly associated with Ir-AE, 4) the percentage of patients with positive auto-antibodies and family history of autoimmune disease, 5) the percentage of patients requiring permanent ICI discontinuation due to musculoskeletal Ir-AE, 6) the association between musculoskeletal Ir-AE and oncologic response and 7) the risk of flare in patients with pre-existing autoimmune disease (PAD).

Methods: An electronic (PubMed) search was performed aiming at identifying all studies reporting musculoskeletal Ir-AE.

Results: We identified 3 prospective studies, 17 retrospective studies and 4 case series reporting 363 patients in total. Combined data from all 3 prospective studies provide a prevalence rate of 6.13%. Most patients were males (59.68%) and the vast majority (73%) were on programmed death-1 (PD-1)/programmed death ligand-1 (PD-L1) inhibitors. Most studies report a median time of ≤ 12 weeks from first ICI administration to symptom onset. The main clinical phenotypes reported were: a) inflammatory arthritis (57.57%), b) myositis (14.04%) and c) polymyalgia rheumatica (PMR) (12.12%). A total of 256 patients required steroids (70.52%) and 67 patients (18.45%) were treated with DMARDs. From the 363 patients reported in total, 265 (73%) were treated with PD-1/PD-L1 inhibitors in sharp contrast to only 11 (3.03%) with CTLA4 inhibitors with the rest patients receiving combination immunotherapy. Positive auto-antibodies and family history of any autoimmune disease were present in 18.48% and 19.04% of cases, respectively. Only a few patients (19%) had to discontinue treatment due to musculoskeletal Ir-AE. Two prospective studies show that significantly more patients with musculoskeletal Ir-AE exhibit a favorable oncologic response compared to patients not exhibiting such manifestations whereas retrospective studies show that 77.22% of patients with musculoskeletal Ir-AE have a good tumor response.

Conclusion: One out of 15 patients treated with ICI will develop musculoskeletal Ir-AE; in most cases the severity of these manifestations is mild/moderate and usually ICI is continued. Rheumatologists should familiarize themselves with this new clinical entity and develop relevant therapeutic algorithms.

Disclosure of Interests: None declared

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FRI0475 STEROID SPARING AGENTS IN POLYMYALGIA RHEUMATICA: A SYSTEMATIC REVIEW

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Background: Polymyalgia rheumatica (PMR) is the commonest chronic inflammatory musculoskeletal disease of the elderly. The mainstay of treatment for PMR is long term systemic glucocorticoid (GC), which is associated with significant systemic toxicity. There is a need for steroid sparing drugs in PMR to reduce GC cumulative dose and GC induced adverse effects. (1)

Objectives: To evaluate the role of steroid sparing agents in PMR.

Primary outcomes:

1. Steroid sparing effect of the intervention, measured by difference in cumulative glucocorticoid dose
2. Percentage of patients in remission.

Secondary outcomes:

1. Mean reduction of CRP/ESR
2. Adverse event/toxicity the drugs being compared—measured as number of patients with adverse events in the compared groups
3. Percentage of patients with relapse during study period
4. Mortality

Methods: Electronic databases including Medline, Embase and Cochrane databases (CENTRAL) were searched since inception for prospective randomized control trials comparing disease modifying anti rheumatic drugs (DMARDs) and biologics with systemic GC in PMR, published in English with more than 20 patients and a minimum study duration of 24 weeks. As different classification criteria for PMR exist, studies were included if they used any accepted classification criteria for PMR. Case series, case reports, retrospective, non-randomized trials, abstracts, systematic reviews and non English language trials were not included. Patients with Giant cell arteritis (GCA) were excluded. Risk of bias and quality was assessed using the Cochrane tool.

The studies were assessed for cumulative GC dose, proportion of patients in remission, proportion of patients with relapse, reduction in inflammatory markers, adverse events and mortality.

Results: 5 studies were selected for final review—3 studies involving Methotrexate, one study on azathioprine, one on Infliximab. The study on Azathioprine

had high risk of bias, small sample size and low quality (Level 2 evidence) with high attrition rate but it revealed reduction of daily prednisolone with Azathioprine. A high quality RCT (Level 1) did not confirm a steroid sparing effect with Infliximab vs placebo, and there was no significant difference between relapse or remission rate. Methotrexate studies showed conflicting results: one high quality RCT (Level 1) and one low quality RCT (Level 2) on Methotrexate revealed statistically significant steroid sparing effect, however the remaining study did not demonstrate between Methotrexate and placebo. Two methotrexate studies assessed the risk of relapse, with conflicting results (relapses 73% placebo vs 47% methotrexate; or no difference).

Methotrexate was not associated with increased adverse effects in any of the studies. Azathioprine was associated with significant adverse events resulting in high attrition.

A meta analysis was not performed for methotrexate as the studies were heterogeneous.

Conclusion: There is a lack of evidence regarding DMARDs and biologics in PMR. Methotrexate is an effective steroid sparing agent, and is not associated with increased adverse events. Azathioprine may be effective but is associated with significant adverse events. Infliximab is not an effective steroid sparing agent in PMR. More high quality RCTs are needed to study the efficacy of steroid sparing agents.

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FRI0476

RHEUMATIC MANIFESTATIONS DURING INFLAMMATORY BOWEL DISEASE

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Background: Rheumatologic manifestations are frequent extraintestinal manifestations (MEI) of chronic inflammatory bowel disease (IBD). Some of these manifestations develop in parallel with the underlying disease, others evolve on their own account. They sometimes lead to reconsider the initial therapy for intestinal purposes.

Objectives: The aim of our study is to specify the epidemioclinical characteristics of osteoarticular manifestations of chronic inflammatory bowel disease and their possible impact on intestinal disease

Methods: This is a retrospective study conducted between January 2000 and December 2015 including patients hospitalized in our department for chronic inflammatory bowel disease (IBD).

Results: During the study period, 206 patients with IBD were hospitalized in our department, 78 of whom had rheumatic MEI (frequency equal to 37.8%). These 78 patients were divided into 48 men and 30 women with a sex ratio of 1.6 and an average age of 40.7 ± 13.6 years (18–79). They had Crohn's disease in 60% of the cases. The average length of service for IBDs was 83 ± 73 months (4–360). Osteoarticular MEIs were peripheral in 56.4% of cases, axial in 29.5% of cases, mixed in 6.41% of cases with the presence of osteopenia in 6.41% of cases and osteoporosis in 1.28%. The activity of IBD associated with these MEI was moderate with an average number of outbreaks / year of 1.6 ± 0.8. These patients were treated with salicylates in 30.7% of the cases using corticosteroid therapy at least once in 23% of the cases. Maintenance treatment based on immunosuppressants was found in 38.46% of cases and anti-TNF alpha in 10.25% of cases. During follow-up, 3 patients died (3.84%). There was no significant difference between patients with IBD with rheumatic MEI and without rheumatic MEI regarding epidemiological data and disease activity.

Conclusion: Rheumatic MEIs are found in almost 40% of IBDs. They affect men more frequently than women and Crohn's disease than UC. They are rather peripheral and do not associate with a more important activity of the disease.

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FRI0477

SYSTEMIC TREATMENT IN SARCOIDOSIS. STUDY OF 377 PATIENTS FROM A SINGLE UNIVERSITY HOSPITAL

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Background: Sarcoidosis is a multisystemic disease characterized by the formation of non-necrotizing granulomas. The most frequently affected organs are lungs, skin and eyes. Systemic corticosteroids are the most used drugs in the treatment of this disease. Conventional and biological immunosuppressants (IS) may also be used (1-3).

TABLE. Systemic treatment of sarcoidosis according to clinical domains.

ORGAN INVOLVEMENT	CONVENTIONAL IS							BIOLOGICAL IS									
	Cases	NT	OCS	MD of OCS (mg/d)*	IVMP	MTX	AZA	CFM	MMF	BT	IFX	ADA	ETN	GLM	TCZ	RTX	CR
Pulmonary, n(%)	319(84.6)	128(40.1)	185(58)	43.6±18.8	13(4.1)	46(14.4)	13(4.1)	2(0.6)	3(0.9)	21(6.6)	12(3.8)	16(5.0)	0	1(0.3)	2(0.6)	3(0.9)	64(33.5)
Cutaneous, n(%)	124(32.9)	50(40.3)	66(53.2)	38.0±20.2	4(3.2)	18(14.5)	4(3.2)	1(0.8)	0	9(7.3)	5(4)	9(7.3)	1(0.8)	2(4.2)	0	1(0.8)	29(39.2)
Ocular, n(%)	48(12.7)	5(10.4)	38(79.2)	41.5±17.6	10(20.8)	23(47.9)	8(16.7)	1(2.1)	1(2.1)	13(27.1)	5(10.4)	11(22.9)	1(2.1)	2(4.2)	2(4.2)	0	10(23.3)
Musculo-eskeletal, n(%)	108(28.6)	41(38)	65(60.2)	39.2±18.7	5(4.6)	26(24.1)	6(5.6)	0	0	12(11.1)	8(7.4)	8(7.4)	1(0.7)	2(1.9)	0	1(0.9)	24(35.8)
Hepatic, n(%)	41(10.9)	12(29.3)	27(65.9)	43.8±15.2	3(7.3)	6(14.6)	1(2.4)	1(2.4)	0	1(2.4)	1(2.4)	1(2.4)	0	0	0	0	6(20.7)
Neurologic, n(%)	27(7.2)	4(14.8)	23(85.2)	50.9±20.2	5(18.5)	14(51.9)	5(18.5)	0	0	9(33.3)	7(25.9)	5(18.5)	1(3.7)	2(7.4)	1(3.7)	1(3.7)	6(26.1)
Cardiac, n(%)	8(2.1)	4(50)	4(50)	40.0±28.3	1(12.5)	2(25)	1(12.5)	1(12.5)	0	2(25)	2(25)	2(25)	0	0	0	0	1(25)
Renal, n(%)	22(5.8)	2(9.1)	20(90.9)	47.1±13.8	1(4.5)	6(27.3)	2(9.1)	0	0	2(9.1)	1(4.5)	2(9.1)	0	0	0	0	3(15)
Löfgren's síndrome, n(%)	44(11.7)	18(40.9)	24(54.5)	29.8±15.3	0	3(6.8)	1(2.3)	0	0	2(4.5)	1(2.3)	2(4.5)	0	0	0	1(2.3)	19(69.2)
Heerfordt's síndrome, n(%)	2(0.5)	0	2(100)	57.5±17.7	2(100)	2(100)	1(50)	0	0	2(100)	2(100)	2(100)	0	0	0	0	0
TOTAL, n(%)	377(100)	161(42.7)	206(54.6)	48.2±19.0	15(4.0)	53(14.1)	16(4.2)	2(0.5)	3(0.8)	28(7.4)	15(4.0)	20(5.3)	1(0.3)	2(0.5)	3(0.8)	3(0.8)	72(33.3)

NT: no treatment; MD: maxim dose; OCS: oral corticosteroids; IVMP: intravenous methylprednisolone; BT: biological therapy, CR: complete response

* Mean (±SD)