Methods: Data from the Clinical Practice Research Datalink Aurum were analysed from 01/04/17 to 01/10/2021 to describe episodes of care for patients with musculoskeletal (MSK) conditions, in a primary care setting, for pre-COVID-19 (01/04/2017–31/03/2020), early-COVID-19 (01/04/2020–31/07/2021), and late-COVID-19 pandemic (01/08/2020–31/10/2021) periods. Prevalent and incident MSK consultations were determined. Referrals were matched to these consultations. Trends in referrals to MSK services and further incident diagnoses of iRMDs were described using Joinpoint regression and comparisons made between time-periods. Negative binomial regression was used to compare incident rates between time-periods: first MSK consultation to RA/JIA/iRMD diagnosis; first MSK consultation to first referral; first referral to RA/JIA/iRMD diagnosis. The number of consultations between first MSK consultation and referral/diagnosis were described. Results were adjusted for age and sex and further stratified by geographical region and deprivation.
Results: The incidence of RA and JIA reduced by -13.3% (from 32.0 to 17.2 per 100,000) and -17.4% (from 1.8 to 0.97 per 1,000,000) per month respectively between January 2020 and April 2020, and then increased by 1.9% (from 17.2 to 25.2 per 100,000) and 3.7% (from 0.97 to 1.3 per 1,000,000) per month respectively between April 2020 and October 2021. The incidence of all diagnosed iRMDs was stable until October 2021. Referral incidence decreased between February 2020 and May 2020 by -16.8% (from 4.8 to 2.4 per 100) per month in patients presenting with a MSK condition. After May 2020, referrals increased significantly (16.8% per month from 2.4 to 4.5 per 100) to July 2020. Time from first MSK consultation to RA diagnosis, and referral to RA diagnosis increased in the early-pandemic period (rate ratio (RR) 1.11, 95% confidence interval (CI) 1.07-1.15; RR 1.23, 95%CI 1.17-1.30) and remained consistently higher in the late-pandemic (RR 1.13, 95%CI 1.11-1.16; RR 1.27, 95%CI 1.23-1.32) periods respectively, compared to the pre-COVID-19 period.
Conclusion: Patients with underlying RA/JIA that developed during the pandemic may be yet to present, or in the process of being referred and/or diagnosed. Primary care clinicians should remain alert to this possibility and consider the use of fast-track referral pathways where indicated. It is apparent that patients developing incident episodes of inflammatory arthropathies may display a prodrome of other MSK symptoms and conditions, which alone may not warrant referral but in combination require further investigation. Commissioners should be alert to these findings to allow for the appropriate planning and commissioning of services.

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POS1000-HPR CORRELATION OF ABNORMAL DIET AND ABNORMAL LIFESTYLE WITH INFLAMMATORY MARKERS AND RAPID 3 SCORE IN AUTOIMMUNE RHEUMATIC DISEASE-RELATED ARTHRITIS (RA, SPA AND PSA) AFTER TREATMENT

Keywords: Inflammatory arthritides, Lifestyles, Diet and nutrition

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Background: It is considered that unhealthy diet and unhealthy lifestyle has a possible role in inflammation of patients with Rheumatoid arthritis (RA), Spondyloarthritis (SpA) and Psoriatic arthritis (PsA).
Objectives: We set out to find out the role of unhealthy diet and unhealthy lifestyle in the regulation of inflammation after treatment in our patients with autoimmune arthritides such as RA, SPA, PSA.
Methods: A retrospective analysis was carried out using a questionnaire on diet and lifestyle for our defined study population. Our source data was analyzed for inflammatory markers such as CRP, ESR and RAPID 3 scores post-treatment for the patients who filled the questionnaire. A total of 56 patients participated who visited our clinic. After obtaining informed consent, data was gathered through interview method and was further correlated with ESR, CRP and RAPID 3 scores post treatment. Based on consensus, unhealthy diet was defined as consuming red meat anytime, having more than two teaspoons of sugar per day, smoking any amount or in any frequency, and daily alcohol consumption beyond the usual acceptable standard daily limits. Unhealthy lifestyle was defined as spending more than 6 hours per day sitting without taking any break and never engaging in any physical exercises. All the parametric measures were represented as mean ± SEM, and categorical variables were represented in contingency tables as number of incidences/occurrences. The continuous variables were compared by One-way Anova, categorical variables were analyzed by Chi-square test (non-parametric test) and correlation analysis was performed using Pearson's correlation test. The $p<0.05$ was considered as statistically significant.
Results: Average age of our study group of 56 patients was 48 years, 64% were female, 50% were homemakers, mean duration of treatment was 51 months, predominance of RA (42%), PsA patients (25%), SPA (31%) and a few overlaps. Mean weight was 67.6kg and mean height was 158.76cms. 77% were on combination of CS DMARDS + TS DMARDS. 46% reported they consumed red meat any time, 68% consumed sugar more than 2 teaspoons per day, 9% were smokers while 21 % consumed alcohol daily above the usual defined daily limits. 34% of study population were sedentary, 17% sitting for long hours without break, while 38% with minimal or no exercise. We observed no statistically significant (p 0.5798) correlation between unhealthy diet and RAPID 3 scores post treatment. Similarly, there was no statistically significant correlation between unhealthy diet and ESR (P 0.09) and CRP (p 0.7). There was again no statistically significant correlation between unhealthy lifestyle and CRP (p 0.539), ESR (p 0.164) and RAPID 3 scores (p 0.7) post treatment. However when we analyzed the unhealthy lifestyle parameter sitting for more than 6 hours without break separately we found the correlation of sitting for more than 6 hours without break and RAPID 3 scores to be statistically significant in our study population (p 0.04).
Conclusion: In our study group with limited number of patients we found no statistically significant correlation of unhealthy diet or unhealthy life style in regulation of inflammation post treatment in patients with inflammatory arthritides (RA, SpA and PsA). However, we found that sitting for 6 hours without break and RAPID 3 scores statistically correlated well. This possibly indicates that those patients with inflammatory arthritides (RA, SpA, PsA) who did not move from one place beyond 6 hours in a day had persisting poor quality of life even after treatment suggesting that "Sitting beyond 6 hours without a break could be deemed as the new smoking". But, more patient numbers would be required to retest the same hypothesis at a later stage.
Unhealthy Lifestyle vs Rapid 3 scores Correlation.
Criteria: Sitting for More than 6 Hours.
p value 0.04

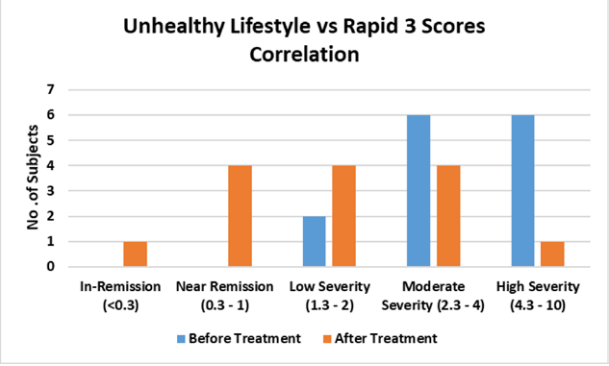

Figure 1.

REFERENCES: NIL.
Acknowledgements: NIL.
Disclosure of Interests: None Declared.
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POS1001-HPR THE IMPACT OF FRAILTY ON FEAR OF FALLING, QUADRICEPS MUSCLE STRENGTH AND FUNCTIONAL PERFORMANCE IN OLDER ADULTS WITH TOTAL KNEE ARTHROPLASTY DUE TO KNEE OSTEOARTHRITIS

Keywords: Osteoarthritis, Outcome measures

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Background: Frailty has been linked with poor quality of life, mortality, and readmission to the hospital. Also, frailty may have an impact on patients' capacity to enhance their functional ability which may be revealed by impaired muscle strength and increased fear or risk of falling. The presence of frailty is generally investigated before the arthroplasty surgery, however, patients may be at risk of future adverse health outcomes during the post-surgical period.
Objectives: To investigate the impact of frailty on fear of falling, quadriceps femoris muscle strength, and functional performance among older adults who had undergone total knee arthroplasty due to knee osteoarthritis.
Methods: A total of 70 patients were evaluated aged between 60 to 90 years, had undergone total knee arthroplasty surgery at least one year before the study. Patients were categorized according to their frailty status based on the FRAIL scale. The FRAIL scale includes 5 items as fatigue, resistance, ambulation, illness, and loss of weight (scoring: ≥3/5 criteria as frail, 1-2/5 as pre-frail, and 0/5 as robust). The Falls Efficacy Scale (FES) was utilized to determine the fear of falling. Bilateral isokinetic quadriceps femoris muscle strength was evaluated at 180 deg/sec. The Timed Up and Go (TUG) test was used to assess functional performance. A between-group comparison with post hoc analysis was performed to reveal the effects of frailty on outcome measures.
Results: The mean age of patients was 71.04±6.43 years with 87.1 % being female. According to the FRAIL scale, 30.0 % of the patients were frail, 44.3 % were pre-frail, and 25.7 % were robust. The frail group had higher fear of falling and lower functional performance compared to pre-frail and robust individuals ($p<0.05$). The peak torque of the quadriceps femoris muscle at 180 deg/sec was lower in the frail group compared to pre-frail and robust patients ($p<0.05$). No differences were detected between robust and pre-frail patients ($p>0.05$).
Conclusion: Our findings indicate that frailty status should be considered during the routine assessment of patients who had undergone total knee arthroplasty. Concomitant frailty during the post-surgical period may decrease functional performance, increase fear of falling, and deteriorate muscle strength which may result in increased fall risk and adverse health outcomes. Patients may need a multimodal intervention including muscle strengthening and postural balance exercises to reverse the effects of frailty.
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Table 1. Comparison of patients according to their frailty status.

	Robust (n = 18)	Pre-frail (n = 31)	Frail (n = 21)	P
Age, mean (SD) years	69.0 (4.35)	70.2 (6.68)	73.9 (6.81)	0.039*
BMI, mean (SD), kg/m2	32.81 (5.96)	34.75 (5.66)	34.71 (7.16)	0.531
Falls Efficacy Scale, mean (SD)	21.16 (9.30)	32.23 (17.90)	44.47 (15.46)	0.001**
TUG, mean (SD), sec	11.77 (2.55)	14.58 (4.70)	17.02 (4.05)	0.001**
Knee extension peak torque (affected extremity), mean (SD), Nm	34.07 (9.78)	31.28 (10.50)	24.27 (7.72)	0.003**
Knee extension peak torque (non-affected extremity), mean (SD), Nm	37.13 (12.06)	30.54 (9.80)	26.81 (9.47)	0.022**

*Significant differences between frail and robust patients.** Significant differences between frail to pre-frail and robust patients.

Acknowledgements: NIL.
Disclosure of Interests: None Declared.
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POS1002-HPR **PREDICTIVE FACTORS FOR MAJOR ADVERSE CARDIOVASCULAR EVENTS IN SERBIAN ANTIPHOSPHOLIPID SYNDROME PATIENTS– A 10-YEAR FOLLOW-UP STUDY**

Keywords: Anti-phospholipid syndrome, Cardiovascular disease

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Background: Non-valvular cardiac disease in antiphospholipid syndrome (APS) has been modestly evaluated.
Objectives: We wanted to assess the prevalence and evolution of major adverse cardiovascular events (MACE) in a cohort of APS patients.
Methods: From a large cohort of 181 APS patients included in a study from 2011-2012.year at University Clinical Hospital Center Bezanijska kosa, Belgrade, Serbia, data for the occurrence of MACE in 10 years of follow-up were evaluated in 82 patients (86.6% females, 62.2% with primary (PAPS), and 37.8% patients with APS associated with systemic lupus erythematosus (SLE) (sAPS)). At the inclusion in all patients, a transthoracic echocardiography study for the assessment of dimensions and functionality of the left and right heart along with valvular functions and morphology has been performed along with color doppler scan of carotid arteries for the intima-media thickness and presence of plaques, and flow-mediated dilatation of the brachial artery (FMD) as markers of subclinical atherosclerosis. Standard atherosclerotic risk factors prevalence was analyzed. Antiphospholipid antibodies (aPL) analysis included the detection of aCL (IgG/IgM), ß2GPI (IgG/IgM), and LA, and all patients were treated according to the valid guidelines by the rheumatologist. Data regarding the occurrence of new myocardial infarction (MI), cerebrovascular events (CVI), arterial and/or venous thrombosis, heart failure (HF), and cardiovascular death (considered as MACE) have been collected 10 years after inclusion.
Results: The prevalence of standard atherosclerotic risk factors was less than 40% in both study groups. Left ventricle ejection fraction (LVEF) was over 45% in more than 90% of patients in both groups (p=0.246) with valvular dysfunction present in 49% of PAPS and 58.1% of sAPS patients (p=0.426). FMD was lowered in 29.4% of PAPS and 29% of sAPS (p=0.971) and carotid atherosclerotic plaques were present in 41.2% of PAPS and 64.5% of sAPS patients (p=0.040). 9.8% PAPS and 12.9% sAPS had coronary artery disease (CAD) (p=0.724) and HF was present in 7.8% PAPS and 3.2% sAPS (p=0.645). MACE occurred in 17.6% of PAPS and 22.6% of sAPS (p=0.585). The new MI occurred in 9.8% of PAPS and 9.7% of sAPS (p=1.000), CVI in 5.9% of PAPS and 3.2% of sAPS (p=1.000), HF in 5.9% of PAPS and 3.2% of sAPS (p=1.000) and cardiovascular death in 9.8% of PAPS and 12.9% of sAPS (p=0.724). New thrombotic events (arterial and/or venous) occurred in 15.7% of PAPS and 17.2% of sAPS (p=1.000). During the follow-up period, 66.7% of PAPS and 55.2% of SAPS (p=0.313) were treated with aspirin, 25.5% of PAPS and 25.0% of sAPS with warfarin, and chloroquine was administered in 46.8% of PAPS and 53.6% of sAPS (p=0.571). Age (p=0.008), gender (p=0.034), thrombotic APS (p=0.033), hypertension (p=0.003), diabetes mellitus (p=0.043), and cardiovascular manifestations present at the time of APS diagnosis (p=0.035), namely CAD (p=0.001) and HF (p=0.005) were significantly associated with 10y MACE. In our cohort, aPL type and category were not associated with 10y MACE. In a multivariate logistic model, age. hypertension, and HF were independent predictors for 10y MACE (p=0.012, OR 8.406, p=0.032, OR 4.588, p=0.019, OR 20.377, respectively for CI 95%).
Conclusion: APS patients develop new cardiovascular events despite optimal medical therapy. Cardiovascular evaluation at the time of diagnosis and proper cardiologist follow-up with the rigorous treatment of standard atherosclerotic risk factors is of utmost importance.
REFERENCES: NIL.
Acknowledgements: NIL.
Disclosure of Interests: None Declared.
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HPR Interventions (educational, physical, social and psychological)

POS1003-HPR **EFFECTS OF VIRTUAL REALITY IN PATIENTS WITH CHRONIC REFRACTORY PAIN SYNDROMES UNDERGOING A MULTIMODAL PAIN PROGRAM**

Keywords: Health services research, Fibromyalgia, Pain

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Background: Virtual reality (VR) has shown efficacy and safety in reducing pain in various indications. Our department has been using virtual reality applications for several years in the multimodal pain program, where patients also undergo a detailed physical and psychological evaluation, allowing for distinct phenotyping.
Objectives: The aim of this study was to investigate the quantitative and qualitative analgetic and anxiolytic effect of a virtual reality (VR) procedure, and to identify patient clusters with a positive response to virtual reality.
Methods: 201 patients with refractory chronic pain syndromes (mainly back pain, primary or secondary fibromyalgia) who participated in a two-week multimodal treatment were included. Of those, 43 performed VR sessions under supervision. Pain (0-10) and anxiety (0-10) were assessed before and directly after a 10-minute VR session (Healthy Mind, France). Multivariate analysis with clinical variables and unsupervised machine learning for clustering analyses by hierarchical agglomerative clustering using the Ward variance minimization algorithm was performed (Python 3.10). In 40 patients, we performed qualitative user experience (UX) assessment of VR by telephone interviews.