THU0598 CAN YOU HEAR THE JOINTS CRYING? MUSCULOSKELETAL EXAMINATION IN JUNIOR DOCTORS' MEDICAL ADMISSION CLERKINGS

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Background: Physical examination is an indispensable skill in the art of medicine which, together with history taking, enables physicians to achieve a clinical diagnosis. Previous studies have consistently shown wide variations in the documentation of physical examination findings on systemic review (1,2). In particular, musculoskeletal examination was found to be frequently omitted.
Objectives: The aim of this study was to evaluate the quality of junior doctors' medical admission clerking, with a focus on clinical examination.
Methods: Fifty acute medical admission clerking entries by junior doctors in a university hospital were reviewed. Case notes were assessed for clinical details and physical examination performed.
Results: Mean age was 69. The commonest presenting complaint was fall or collapse. Musculoskeletal examination was only documented in 24% of admitted patients. There was disparity in the quality of documentation, ranging from complete omission to comments such as "valgus deformity", "erythema", "limited abduction" and "unable to SLR". Overall, the documentation of cranial nerves examination, limb neurological examination, abbreviated mental test and Glasgow coma scale was less robust (40%, 52%, 48% and 66% respectively). The documentation of musculoskeletal and neurological examination contrasts markedly with other systems: respiratory system 100%, cardiovascular system 98% and abdominal system 98%.
Conclusions: The omission of musculoskeletal examination may reflect a general apathy towards musculoskeletal health. Despite fall or collapse being the most common reason for medical admission in this study, musculoskeletal examination was only documented in a minority of patients. With an aging patient population, it is vital for physicians to address musculoskeletal disorders which are likely to be more prevalent on the acute medical take. Junior doctors' lack of confidence in performing musculoskeletal examination may also be another contributing factor. It is important that junior doctors are provided feedback on their clinical assessment by senior doctors when essential components of examination are omitted. National training programmes should consider including these areas in postgraduate curriculum to ensure competency is achieved.
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THU0599 BENEFIT RISK RATIO FOR BIOLOGICAL AGENTS IN JUVENILE IDIOPATHIC ARTHRITIS, A META-ANALYSIS OF RANDOMIZED CLINICAL TRIALS

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Background: The biological agents (BAs) have revolutionized the care and have improved the prognosis of juvenile idiopathic arthritis (JIA). Effectiveness and short-term tolerance was well established in randomized clinical trials (RCTs), initially in JIA. However, there is an insufficient evidence for the long-term tolerance[1]. The serious adverse events (SAEs) include infections, malignancies and drug induced auto-immune diseases (e.g. uveitis).
Objectives: To assess the benefit/risk balance of BAs assessed by RCTs vs placebo or vs standard treatment in JIA, using meta-analysis (MA) technique.
Methods: All RCTs in JIA comparing BAs to placebo or standard treatment (e.g. methotrexate) published between 1950 and February 2016 were eligible. Data source: Cochrane, Medline, ClinicalTrial.gov register. The ILAR classification for JIA[2] was used and the clinical efficacy of treatment was measured by the ACR pediatric score[3]. Efficacy was analyzed considering the design of study. Effectiveness (ACRpedi30) was estimated as the measure of the benefit of the BAs and SAEs as a measure of risk by random effect models. The benefit/risk balance was analyzed using the net efficacy adjusted for risk (NEAR)[4]. An OR >1 indicates that the treatment has a beneficial effect and OR <1 a deleterious effect. Subgroups analyses were made to account the heterogeneity of JIA. We explored potential heterogeneity by subgroups analysis according with BAs and JIA subtypes.
Results: We included 20 RCTs conducted in JIA encompassing 1533 children. The disease duration, at the inclusion of RCTs, varies between 2 and 6 years for most studies. The maintenance of the therapeutic effect was estimated in the studies using withdrawal design in 6 studies. The maintenance of clinical response showed a large heterogeneity. Sub-groups analyses showed that the heterogeneity is marked in the systemic JIA[5]. The global NEAR OR was in favor of BAs in parallel (OR 3.83, CI 1.49–9.82) and withdrawal (OR 2.75, CI 1.51–5.01) trials. The efficacy of BAs in JIA was superior to the placebo in parallel (OR 5.46, CI 2.26–13.21) and withdrawal (OR 3.52, CI 2.15–5.77) trials. In RCTs (parallel and withdrawal design), SAEs did not differ between BAs and control (OR 1.18, CI 0.73–1.9). No death occurred at follow-up.
Conclusions: This is the first MA assessing all BAs used in all JIA categories combined. This MA in patients with JIA shows that the benefit/risk ratio of BAs in JIA is favorable.
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THU0600 CUMULATIVE ADVERSE CHILDHOOD EXPERIENCES ARE ASSOCIATED WITH POOR OUTCOMES IN ADULTS WITH SYSTEMIC LUPUS ERYTHEMATOSUS

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Background: Adverse childhood experiences (ACE) such as abuse, neglect and household challenges are associated with poorer adult health status and onset of rheumatic diseases. There has been no research associating ACE with outcomes among adults with systemic lupus erythematosus (SLE).
Objectives: To characterize relationships of ACE and health outcomes of disease activity, damage, quality of life and depression in SLE patients.
Methods: Data were derived from the California Lupus Epidemiology Study (CLUES), a population based, multi-ethnic cohort of patients with SLE. Participants completed self-report measures of SLE activity (Systemic Lupus Activity Questionnaire; SLAQ), damage (Brief Index of Lupus Damage; BILD), quality of life (SF-36), depression (Patient Health Questionnaire; PHQ8) and sociodemographics. They completed the Adverse Childhood Experiences (ACE) survey, a validated 10-item scale covering 3 domains (abuse, neglect and household challenges prior to age 18). We compared demographics and SLE outcomes by ACE score and domains using ANOVA.
Results: The 166 CLUES participants were mostly women (89%) and were racially/ethnically diverse (31% non-Hispanic White, 22% Hispanic, 15% African American, 31% Asian American). Mean age was 44±14; mean age at diagnosis 28±12. The median ACE score was 1; 30 (18%) had a score of 4 or higher. ACE scores $\geq$4 were more common in Hispanic (27%) and African American (32%) participants (p=0.01) compared to other races/ethnic groups, and in participants with poverty level incomes (61% vs 13%, p$<$0.001); but did not differ by education or age at study entry or diagnosis. Higher overall ACE scores were associated with greater SLE activity and damage, poorer quality of life, and higher levels of depressive symptoms. For each ACE domain, increasing scores were generally associated with worse outcomes, but did not always reach statistical significance (Table).

Table 1. SLE Outcomes by Adverse Childhood Event (ACE) Scores and Domains

	Score	n	Outcomes [mean (sd)]			
			SLAQ	BILD	SF36PCS	PHQ8
Total ACE score	0	66	6.0 (6.2)	1.7 (2.0)	46.0 (10.5)	4.3 (4.1)
	1	31	6.9 (5.4)	1.4 (1.5)	44.3 (8.5)	4.8 (4.0)
	2–3	39	11.2 (7.6)	1.7 (2.1)	41.0 (10.5)	7.8 (5.6)
	4+	30	11.8 (8.0)	3.0 (2.9)	38.1 (11.1)	7.3 (4.6)
		p-value	$<$0.001	0.02	$<$0.001	0.003
Household Challenges	0*	66	6.0 (6.2)	1.7 (2.0)	46.0 (10.5)	4.3 (4.1)
	1	33	9.1 (6.6)	1.8 (2.2)	42.3 (8.8)	6.3 (5.7)
	2+	24	11.5 (8.0)	2.4 (2.2)	40.3 (10.6)	7.6 (5.1)
		p-value	0.002	0.35	0.04	0.01
Neglect	0*	66	6.0 (6.2)	1.7 (2.0)	46.0 (10.5)	4.3 (4.1)
	1	33	11.6 (7.0)	2.4 (2.7)	37.7 (9.9)	8.1 (4.8)
	2+	24	9.8 (7.4)	1.6 (0.9)	42.2 (5.2)	6.4 (2.6)
		p-value	$<$0.001	0.33	0.001	$<$0.001
Abuse	0*	66	6.0 (6.2)	1.7 (2.0)	46.0 (10.5)	4.3 (4.1)
	1	26	10.1 (6.3)	1.7 (1.9)	38.8 (10.4)	8.1 (4.5)
	2+	26	13.9 (7.6)	3.0 (3.2)	37.5 (10.6)	6.9 (4.5)
		p-value	$<$0.001	0.04	$<$0.001	$<$0.001

*Zero-level excludes respondents with scores in other ACE domains.

Conclusions: Adverse childhood experiences are reported frequently in individuals with SLE; accumulation of adverse experiences is associated with poor SLE outcomes. Higher scores in each domain, especially childhood neglect or abuse, were associated with poorer health measures in adulthood. Further research regarding ACE patterns and SLE outcomes is warranted.
Disclosure of Interest: None declared
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THU0601 CARDIOVASCULAR SCREENING AMONG PATIENTS WITH INFLAMMATORY ARTHRITIS: TO WHAT EXTENT DO PATIENTS FOLLOW RECOMMENDATIONS?

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Background: Patients with inflammatory arthritis (IA) have a substantially increased risk for cardiovascular (CV) disease and consequently regular screening is recommended (1).
Objectives: To investigate whether patients with known IA and high CV risk follow the recommendation, given in a nurse-led CV risk screening consultation, to consult General Practice in order to reduce their CV risk. Furthermore to investigate the influence of socioeconomic position and gender.
Methods: A register-based cohort study comprising outpatients at King Christian X's Hospital for Rheumatic Diseases, Graasten, Denmark, diagnosed with rheumatoid arthritis (RA), psoriatic arthritis (PsA) or spondylo arthritis (SpA), who had participated in at least one screening consultation based on the EULAR recommendations (1) between 1st of July 2012 and 1st of July 2015. The primary outcome was a consultation with their GP and at least one intervention of relevance for CV risk within 3 months after the screening consultation.
Results: 1266 patients, 18–85 years of age, were included; 72.5% with RA and 27.5% with SpA or PsA. Of the 447 (35%) with high risk of CV disease, 60% consulted GP after the screening visit compared to 55% for the 819 patients with low risk of CV disease. Of the 60% of patients with high risk who consulted their GP, 41% had at least one relevant intervention. Education $\geq$10 years increased the odds for non-compliance (Odds Ratio [Confidence interval]) (0.72 [0.56;0.92], p=0.01) and age above 65 years increased the odds for compliance (1.50 [1.15;1.95], p=0.03). Income, diagnosis, gender, Low Density Lipoprotein level and systolic blood pressure did not significantly influence the odds to consult their GP after the screening consultation. Among high risk patients, 7.4% had their blood glucose checked at a GP consultation and 6.3% had their blood-pressure measured with at-home equipment after the screening consultation as opposed to 4.8% and 1% among low risk patients.
Conclusions: After a screening consultation, 40% of the patients with high risk of CV disease did not consult their GP at all in the following 3 months. At least 33% of the patients with high risk followed the recommendations to consult their GP and 27% consulted their GP for reasons not possible to clarify in this study. Only age and higher education had a significant influence on the outcome.
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THU0602 WORKER PRODUCTIVITY LOSS REMAINS A MAJOR ISSUE FOR PATIENTS WITH INFLAMMATORY ARTHRITIS AND OSTEOARTHRITIS: RESULTS FROM THE INTERNATIONAL EULAR-PRO WORKER PRODUCTIVITY STUDY

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Background: Rheumatic and Musculoskeletal Diseases such as Inflammatory arthritis (IA) and osteoarthritis (OA) are one of the biggest causes of disability and worker productivity loss which has recently been recognized by European policy makers and the World Health Organization (WHO). However, limited information is available about job characteristics and the level of both presenteeism and absenteeism in employed persons with IA or OA across countries.
Objectives: To describe job characteristics and worker productivity loss in patients with IA and OA in Europe and Canada.
Methods: Patients with IA or OA in paid employment from seven countries within Europe and from Canada were recruited to the EULAR-PRO Worker productivity study. Patients completed a questionnaire including questions about their job, job characteristics and the Work Productivity and Activity Impairment Questionnaire (WPAI) measuring percent hours absent and the percentage their disease affected productivity while working (0–100%=disease completely prevented work). Patients also completed several health-related patient reported outcome measures, including: the Health Assessment Questionnaire (HAQ), Visual Analogue Scale (VAS) general well-being, and EuroQol-5D (EQ-5D).
Results: 503 patients were included in this large international study. Mean (SD) age was 47 (10) years, median [IQR] disease duration 12 [5, 21] years and 94% had IA. 42% had a predominately mentally demanding job, 10% physically demanding job, and 48% a combination; with overall 34% reporting their job being very demanding (see table for country specific results). Respectively 12% and 5% of patients were able to often or always postpone work tasks if need be, whilst, respectively 19% and 51% never or sometimes received help from colleagues which may depend on job/employment type and company size. Twenty-one% of patients reported that they missed time off work due to ill-health in the past week (median [IQR] % time missed due to ill-health 20% [9–50]). Interestingly, a total of 11% were unsatisfied with their current job; and 23% of patients did not disclose their disease to their employer.

	United Kingdom N=76	France N=45	Netherlands N=96	Estonia N=81	Sweden N=66	Romania N=62	Italy N=31	Canada N=46
Age, years	48 (8)	46 (10)	49 (11)	46 (11)	49 (9)	42 (9)	47 (9)	51 (9)
Gender, female	53%	60%	54%	62%	73%	55%	84%	83%
VAS well-being, mm	39 [21-60]	28 [18-49]	30 [11-60]	43 [20-62]	38 [20-61]	35 [12-55]	32 [14-65]	28 [15-60]
HAQ-score	0.63 [0.25-1]	0.25 [0.13-0.63]	0.38 [0-0.5]	0.38 [0.1-0.75]	0.63 [0.38-.88]	0.13 [0-0.63]	0.25 [0-0.5]	0.5 [0.13-1]
EQ-5D	0.62 [0.57-0.69]	0.69 [0.66-0.73]	0.73 [0.62-0.73]	0.66 [0.52-0.73]	0.66 [0.62-0.73]	0.69 [0.62-0.90]	0.69 [0.62-0.88]	0.62 [0.55-0.73]
General job demands:								
Slightly demanding	12%	11%	34%	66%	12%	16%	7%	20%
Demanding	41%	40%	40%	30%	41%	54%	50%	33%
Very demanding	47%	49%	26%	4%	47%	30%	43%	47%
Job satisfaction:								
Satisfied	57%	78%	84%	81%	67%	74%	73%	71%
Neutral	19%	11%	11%	13%	17%	21%	17%	11%
Unsatisfied	24%	11%	4%	6%	17%	5%	10%	18%
% Absent in previous week due to ill-health	16%	20%	15%	26%	23%	18%	26%	33%
% Work time missed due to ill-health*	24 [9-100]	20 [13-34]	50 [19-72]	19 [10-50]	15 [9-50]	15 [9-50]	19 [5-33]	15 [3-50]
% impairment due to ill-health while working (WPAI)#	20 [0-50]	20 [0-30]	20 [0-50]	20 [0-40]	30 [5-45]	20 [10-50]	20 [0-50]	20 [10-60]

Scores are mean (SD) or median [IQR] depending on the distribution of the data.
Categorical data are presented as %.
* In those absent due to ill-health
# WPAI (0= condition no effect on work – 10=condition completely prevented work) * 100%.

Conclusions: This is one of the largest international studies investigating worker productivity loss in patients with IA and OA. It highlights the burden of the disease across countries and the importance of increasing awareness of rheumatological conditions in order to prevent presenteeism and long-term sick leave by providing the best available intervention to the individual patient in paid employment.
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THU0603 DISEASE BURDEN OF KNEE OSTEOARTHRITIS PATIENTS UNDERGOING JOINT REPLACEMENT COMPARED TO MATCHED CONTROLS: A POPULATION-BASED ANALYSIS OF A DUTCH MEDICAL CLAIMS DATABASE

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Background: Knee osteoarthritis (OA) is a progressive joint disease generally associated with increasing pain. In severe symptomatic knee OA, knee prosthesis