The main outcomes that were analysed for the meta-analysis were RA occurrence at 52 weeks and beyond and the absence of radiographic progression at week 52. The meta-analysis was performed using RevMan with Mantel-Haenszel method.

Results: The search identified 595 abstracts, of which 9 RCTs were finally selected (including 2 congress abstracts). Eight were related to undifferentiated arthritis; 1 to VERA. The studies included 1156 patients, weighted mean age 45.8+/-15.2 years, mean symptoms duration 16.2+/-12.6 weeks; 66.0+/-17.7% were female.

The occurrence of RA at week 52 or more was available in 7 studies (assessing 800 patients). Early therapeutic intervention – either methylprednisolone (80 to 120mg IM), methotrexate, TNF-blocker, abatacept or rituximab -reduced the risk of occurrence of RA with a pooled odds ratio (OR) of 0.72 (95% CI [0.54; 0.96]), p 0.02 (Figure).

There was no statistically significant difference between the treatments or placebo, for the absence of radiographic progression (pooled OR 1.36 [0.82;2.27])

The outcome was assessed at Week 52 for all studies, except for Van Dongen 2007 (PROMPT), where it was assessed at Week 120. MethylPDN, methylprednisolone; MTX, methotrexate.

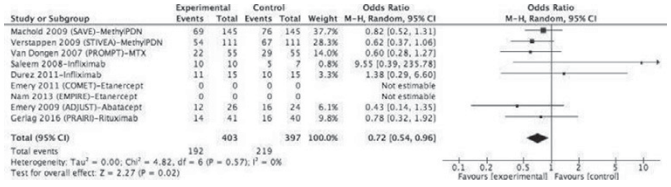

Figure 1. RA appearance at week 52 or more.

Conclusions: This meta-analysis demonstrates that early therapeutic intervention significantly reduces the risk of RA onset in pre-RA patients. The benefit /risk balance and feasibility in clinical practice remain to be further assessed.

Disclosure of Interest: None declared

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WEDNESDAY, 14 JUNE 2017

EULAR Campaign: Don't Delay, Connect Today

OP0012-PARE RHEUMATOSPHERE: REACH NEW HEIGHTS IN DIAGNOSIS AND TREATMENT OF ARTHRITIS BY ENGAGING, EMPOWERING AND INSPIRING

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Background: We aim to reach new heights in diagnosis and treatment of arthritis through research and we believe that part of this encompasses public engagement. Engaging the public is an essential part of scientific life, as the majority of work carried about by researchers is publically funded. Therefore the public are entitled to and should be encouraged to see the conclusions of this work in an easily accessible manner.

Objectives: 1) *Engage* the public about rheumatic disease, what it is, what it does to the body and how we, as scientists and clinicians, address unmet needs in this field.

2) *Empower* patients in order to help them understand their disease and treatments thereby improving patient satisfaction and compliance to therapy.

3) *Inspire* the next generation of scientist by encouraging children to study science at school and raise the profile of these subjects with education authorities and the government.

Methods: Rheumatosphere was established to address public engagement needs in the arthritis research field. We have used a variety of techniques to capture the attention of small and large audiences of all ages. Techniques include: Ultrasound scanning, coffee with a scientist at our cell cafe, posters displays, multidisciplinary classroom lessons in a school environment and comic book drawing. These resources and activities have been deployed at 5 major science events across Scotland in the last 3 years, and at the British society for rheumatology's annual conference in 2016. Further to this we have also attended regular events at the Glasgow science centre and schools across Scotland.

Results: During our first three major events we have had approximately 3000 encounters with the median age of participants being 33 years. Over half (51%) of the people that we engage with directly knew someone affected by rheumatoid arthritis. Engaging the public and patients with visualisation of their own joints using ultrasound is effective in demonstrating how joints function. This then serves as a starting point to highlight current research and celebrate the newer treatment strategies which have resulted in better outcomes for our patients. Feedback from our events show that people are keen to engage and learn more about arthritis, with 80% wanting to know more about autoimmunity and 83% wanting to know more about the clinical work going on throughout Glasgow.

Children at these events and in the classroom are encouraged to learn about the immune system and it's role in health and disease through the medium of comic books and art. Allowing the children to relate scientific topics to an already established and popular media has proven to be an effective learning tool. In 2016, 94% of school pupils who interacted with Rheumatosphere said that they had learned something new about arthritis, including careers options through which they could become involved in helping to better understand and treat disease.

Our future plans include partnering with Government and National Science Centre stakeholders to further develop educational curricula in the arena of musculoskeletal science and immunology.

Conclusions: We feel that engaging with the public and patients is an essential part of our vocation as scientists and clinicians and only by empowering them will we be able to reach new heights in diagnosis and treatment of arthritis.

Disclosure of Interest: None declared

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WEDNESDAY, 14 JUNE 2017

Standing Committee session on paediatric rheumatology

OP0013 PULMONARY MANIFESTATIONS IN JUVENILE ONSET MIXED CONNECTIVE TISSUE DISEASE AFTER LONG-TERM DISEASE DURATION – A NORWEGIAN CASE-CONTROL STUDY

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Background: Pulmonary manifestations in mixed connective tissue disease (MCTD) are common and a major cause of morbidity and mortality [1]. Data on lung involvement in patients with juvenile onset MCTD (JMCTD) are scarce.

Objectives: The aim of this study was 1) to compare pulmonary function abnormalities in a nationwide representative Norwegian JMCTD cohort with that of matched controls, 2) investigate occurrence of interstitial lung disease (ILD) in JMCTD and 3) to evaluate possible associations between pulmonary findings and disease related variables.

Methods: Inclusion criteria were fulfillment of the Kasukawa or Alarcon-Segovia criteria and symptom-onset before 18 years. The control group was randomly drawn from the national population register, after matching for age and gender. Fifty-two patients with JMCTD were examined after mean disease duration 16.2 years, 44 (85%) were female. Patients and controls performed pulmonary function tests (PFT) and a 6 min walk test (6MWT). The patients had a high-resolution CT (HRCT) of the lungs.

Results: Abnormal PFT were found in 24 patients (46%) and in 12 controls (23%) (p=0.01) (table 1).

Variable	JMCTD patients	Controls	P value
Age at examination, years	28.0 (10.3)	29.0 (10.1)	0.61
BMI, kg/m^2	22.7 (3.5)	23.4 (3.0)	0.29
Current smokers daily/occasionally, n (%)	7 (14)	9 (17)	0.59
Never smokers, n (%)	35 (67)	34 (65)	0.83
6MWD, meters	634.3 (76.5)	698.9 (86.6)	<0.01
FVC, litre	3.4 (0.6)	4.3 (1.0)	<0.01
FVC (% of predicted)	89 (14)	109 (11)	<0.01
FEV1, litre	2.9 (0.5)	3.5 (0.8)	<0.01
FEV1 (% of predicted)	89 (13)	102 (11)	<0.01
FEV1/FVC	0.86 (0.06)	0.82 (0.07)	<0.01
DLCO/VA (mmol/kPa min/l)	1.6 (0.2)	1.8 (1.0)	0.26
DLCO/VA (% of predicted)	88 (12)	92 (13)	0.14

More patients than controls had abnormal FVC (11 patients and 0 controls, p<0.01) and FEV1 (12 patients and 2 controls, p<0.01). Diffusing capacity for carbon monoxide adjusted for alveolar volume was abnormal in 12 patients and 8 controls (p=0.34). One patient and 3 controls had a pathological FEV1/FVC (less than 70% of predicted, p 0.62). HRCT showed ILD in 15 patients (29%). The extent of lung parenchyma involved was median 2% (range 1–75) in the patients with ILD. Two patients had more than 20% of lung parenchyma involved (graph 1). The most common abnormalities were reticular patterns, being present in 13 patients (25%). 2 patients (4%) had ground glass attenuation.We could not find correlations between the extent of ILD and PFT or 6MWT. There were no significant differences in PFT values or other disease related variables between the patients with and without ILD.

Conclusions: Patients with JMCTD had significantly reduced pulmonary function after mean 16.2 years disease duration compared to matched controls. However, overall lung function was only moderately reduced. The occurrence of ILD assessed with HRCT was 29%, but the majority of patients with ILD had mild disease. To our knowledge, this is the first systematic case-control study of pulmonary manifestations in JMCTD.

References:

[1] Gunnarsson R, Aalokken TM, Molberg O, et al. Prevalence and severity of interstitial lung disease in mixed connective tissue disease: a nationwide, cross-sectional study. Ann Rheum Dis 2012;71:1966–72.

Disclosure of Interest: None declared

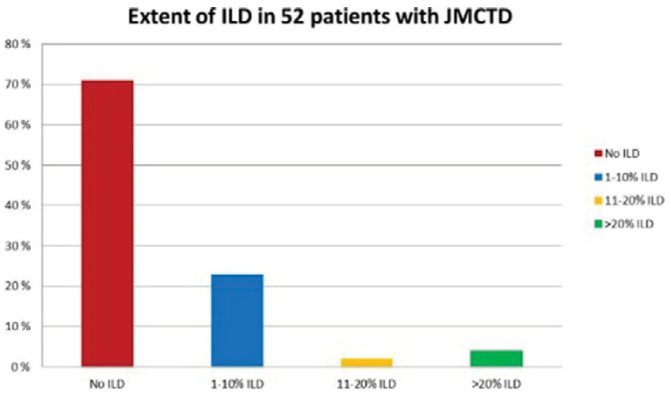

Figure 1

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OP0014 **CONVENTIONAL RADIOGRAPHY IN JUVENILE IDIOPATHIC ARTHRITIS: JOINED RECOMMENDATIONS FROM THE FRENCH SOCIETIES FOR RHEUMATOLOGY, RADIOLOGY AND PEDIATRIC RHEUMATOLOGY**

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Background: Juvenile idiopathic arthritis (JIA) may lead to structural damage. Yet radiographic assessment is seldom considered in studies.
Objectives: To provide pragmatic guidelines concerning conventional radiography (CR) in each subtype of JIA (exclusion of systemic JIA).
Methods: A multidisciplinary task force of 15 French experts (rheumatologists, pediatricians, radiologists) plus one patient's representative, was convened. Following the GRADE[1] method, they formulated a series of research questions concerning CR assessment, at diagnosis and follow-up of each subtype of JIA. Systemic JIA was ruled out. A systematic literature review was conducted, considering articles in which structural damage was detailed (erosion, joint space narrowing, bone deformities). A series of recommendations was elaborated, following evidence-based data, and expert opinion. It underwent an evaluation from an independant committee (including patient's representative), and a final round of Delphi-voting process from the whole expert group.
Results: Of 646 publications identified, 73 original articles were included. The task force produced 4 principles and 31 recommendations. Level of evidence ranked from B to D, level of agreement was high. The experts insisted on weighing indication of CR considering structural risk. The importance of assessing structural progression, the need for constant attention to radioprotection were asserted. Systematic CR of hands and feet are thus recommended in polyarthritis JIA rheumatoid factor positive, and in polyarticular JIA with pejorative prognostic factors. Systematic CR are not recommended in oligoarticular JIA. CR is not the prime imaging technique of the axial skeleton.
Conclusions: These are the first pragmatic recommendations upon CR in JIA. They mostly rely on experts' opinion, due to lack of evidence-based data. CR is still relevant in many situations in JIA, but should not be overlooked, while non-irradiating imagine techniques are developing.
References:

[1] Brożek JL, Akl EA, Compalati E, Kreis J, Terracciano L, Fiocchi A, et al. Grading quality of evidence and strength of recommendations in clinical practice guidelines part 3 of 3. The GRADE approach to developing recommendations. Allergy. 2011 May;66(5):588–95.

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Disclosure of Interest: None declared
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WEDNESDAY, 14 JUNE 2017

Still breaking news on TNF inhibitors in rheumatoid arthritis

OP0015 **INDUCTION OF REMISSION AND MAINTENANCE IN EARLY, AGGRESSIVE RHEUMATOID ARTHRITIS USING ADALIMUMAB IN COMBINATION WITH METHOTREXATE WITH OR WITHOUT SHORT-TERM HIGH-DOSE GLUCOCORTICOIDS: RESULTS OF A PHASE IV MULTICENTER, RANDOMIZED, DOUBLE BLIND STUDY (CLINTRIAL.GOV: NCT00480272)**

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Background: Remission is the current aim of early RA treatment. In patients with early, aggressive RA, combination with adalimumab (ADA) plus methotrexate (MTX) was superior to either MTX or ADA alone in obtaining clinical remission. Moreover, it has been demonstrated that a short-term aggressive treatment with high-dose glucocorticoids (GC) plus conventional DMARDs lead to long-term (up to 5 years) benefits.
Objectives: To compare the proportion of patients who achieve remission at 12 months, between two groups of subjects treated with ADA + MTX + high dose GC (intensive) and ADA + MTX + placebo (standard), and to evaluate the proportion of those maintaining remission at 24 months, after discontinuation of GC at 6 and ADA at 12 months.
Methods: The main inclusion criteria were: active RA, disease duration ≤1 year, GC and MTX-naïvity, at least one predictor of aggressive disease. All subjects received ADA for 12 months and MTX (20 mg/w) to the end of month 24. Subjects were randomized to receive prednisone (orally, 50 mg/d, progressively tapered to 6.25 mg and stopped at month 6) or placebo. Response was evaluated using DAS28, CDAI, SDAI and ACR response criteria. The difference in rate and 95% CI will be computed with a binomial regression model and identity link, while clustering on center. An intention-to-treat analysis was performed.
Results: 118 patients were assigned to standard and 115 patients to intensive group. Remission (DAS28<2.6, SDAI≤3.3, CDAI≤2.8) at 1 year in standard vs intensive group were: 56.25% vs 45.28% (RD= -11%, 95% CI -23 to1, p=0.07), 30.36% vs 21.69% (RD= -9%, 95% CI -20 to 3, p=0.14), and 28.57% vs 22.64% (RD= -6%, 95% CI -18 to 6, p=0.34). DAS28 remission at 2 years was 36.84% in standard vs 30.93% in intensive (RD= -6%, 95% CI -17 to 5, p=0.28). No superiority of the intensive group was seen in ACR20–50–70 response rates at 4, 8, 12, 24 months. The overall frequency of adverse events (AE) in patients that completed the trial was comparable between groups. The percentage of patients who discontinued for AE was higher in the intensive group (9.32% in standard vs 16.52% in intensive, RD=7%, 95% CI 1 to 13, p=0.01).

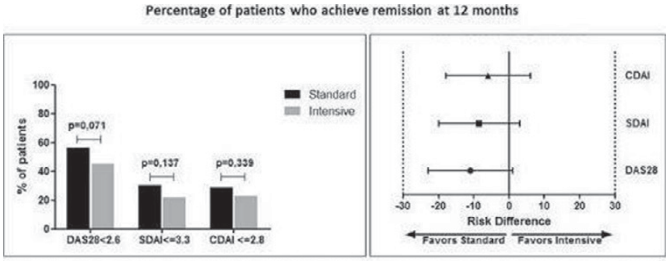

Figure 1. The percentage of patients who achieve DAS28 remission at 12 months was 56,25% in standard vs 45,28% in intensive, with RD of -11% (-23 to 1, p=0,07); SDAI remission of 30,36% in standard vs 21,69% in intensive, with RD of -9% (-20 to 3, p=0,14); CDAI remission of 28,57% in standard vs 22,64% in intensive, with RD of -6% (-18 to 6, p= 0,34).
RD= Risk Difference

Conclusions: Our results confirm that intensive treatment with biologics in early, aggressive RA might be considered to induce and maintain clinical remission. The addition of high-dose GC to a first line treatment with ADA and MTX did not prove to induce a further improvement in efficacy. Although these results should be tested with other biologic therapies, the high rate of drop out for AE in the intensive group should be carefully considered in the risk-benefit ratio.
Disclosure of Interest: None declared
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