with an Esaote MyLab70XVG ultrasound device with a linear probe (7–12MHz) and an automated program measuring intima media thickness (IMT) by radiofrequency ("Quality intima media thickness in real-time. QIMT"), and registered the presence of atheroma plaques (per Mannheim consensus). We determined pulse wave velocity (PWV) by a validated MobilOGraph device. We considered as pathological an IMT >0.9 µ and a PWV ≥10 m/s and the presence of plaque and/or pathological IMT. We prospectively collected mortality and the development of new vascular events over four years and the current smoking status and exposure calculated in pack-year. Statistical analysis was performed using SPSS 17.0 software.

Results: We included 198 patients, excluding 15 because of previous CV events. The mean age was 66.5 years (SD 13.44) 76% were women and the mean BMI was 27.35 (SD 4.82), 31% were smokers, 42.5% hypertensive, 47.5% dyslipidemic and 10.4% were diabetic. The mean duration of RA was 19.95 years (SD 11.88). 76.5% of patients were seropositive and 75.4% had erosions. The mean CRP and ESR were 9.51 ml/L (SD 32.29) and 13.83 mm/h (SD 14.26), respectively. The mean modified SCORE was 1.81 (SD: 1.81). Regarding the vascular study, 48.1% had atheroma plaques, 32.2% a pathologic PWV [mean value of 9.13 (SD 2.12)], and 16.7% had a pathologic IMT [mean value of 748 µ (DE 1188,73)].

31.1% of the patients (57) were smokers or former smokers. The average pack-year was 24.17 (SD: 21.37). No relation was found between current or previous use of tobacco and any of the outcome measures described. However, when considering cumulative exposure to tobacco, there was a trend to correlate with higher values of PWV (p=0.07) and a higher plaque presence (p=0.089) was detected. After 4 years of follow-up, 3 deaths were recorded among smoking patients, but a higher incidence of CV events was not detected in relation to cumulative exposure to tobacco (p=0.09).

Conclusions: The quantification of the exposure by pack-year of cigarette smoked could give us more information about vascular damage in patients with RA. The limitation of our study is the small number of smokers in the time they were followed.

Disclosure of Interest: None declared

AB0372 LEFT ATRIAL FUNCTION IN RHEUMATOID ARTHRITIS PATIENTS

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Background: Rheumatoid arthritis (RA) is a common autoimmune systemic inflammatory disease affecting approximately 1% of the worldwide population. The interaction of genetic and environmental factors results in a cascade of immune reactions, which ultimately lead to the development of synovitis, joint damage, and structural bone damage.\(^1\)

The importance of the left atrium in cardiovascular performance has long been acknowledged. Quantitative assessment of left atrial (LA) function is laborious, requiring invasive pressure-volume loops and thus precluding its routine clinical use. In recent years, novel postprocessing imaging methodologies have emerged, providing a complementary approach for the assessment of the left atrium. Atrial strain and strain rate obtained using either Doppler tissue imaging or two-dimensional speckle-tracking echocardiography have proved to be feasible and reproducible techniques to evaluate LA mechanics.\(^2\)

Objectives: 1. To screen cardiac affection in rheumatoid arthritis patients 2. To assess subclinical echocardiography affection in RA patients

Methods: 30 healthy control, and 45 RA patient subjected to full clinical assessment, DAS 28 ESR score, full laboratory evaluation, conventional and tissue Doppler imaging (TDI) and strain (S) and strain rate (SR) analysis by two-dimensional speckle tracking of the left atrium.

Results: we found statistically significant difference in 2 Left atrial PEF, 2 Left atrial EI, 2 Left atrial TEF, TDI mitral lateral annulus e\(^+\), TDI mitral lateral annulus a\(^+\), Average SR E 1/3 between patients and controls, and negative correlation between TDI lateral e, TDI lateral a, and Strain rate e and rheumatoid factor, There was negative correlation between 2LA PEF, 2LA EI, and 2LA TEF. Rheumatoid factor is correlated to strain rate e, and negatively correlated with left atrial passive emptying

Conclusions: RA had alteration in left LV longitudinal myocardial function, left atrial expansion volume can be a predictor of AF in RA. RA patient had more left atrial stiffness. Our study concluded cardiac affection is more in seropositive RA patients.

REFERENCES:

NONTUBERCULOUS MYCOBACTERIUM INFECTIONS IN PATIENTS WITH RHEUMATOID ARTHRITIS: A SINGLE-CENTRE EXPERIENCE IN JAPAN

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Background: Objectives: Nontuberculous mycobacteria (NTM) infection has been increasing in both general population and immunocompromised patients in Japan. This study aimed to identify the incidence and clinical characteristics of NTM infections in patients with rheumatoid arthritis (RA).

Methods: We performed a cross-sectional analysis and assessed 11 RA patients, who were all female, complicated with NTM (mean age, 66.6 years) at our institute. We examined Steinbrocker Stage and Class, disease duration, positivity of anti-CCP antibody and rheumatoid factor, HAQ-DI, DAS28-ESR, NTM species, radiological features, methotrexate use and dosage, prednisolone use and dosage, biological agent use, and anti-NTM therapy.

Results: Average values obtained with SD were as follows: age (years), 66.6±8.0; Steinbrocker Stage I; 1; II; 0; III, and IV; 9; Class 1; 2; 2; 5; 3; 4; and 4; 0; disease duration (months), 274.7±125.9; positivity of anti-CCP antibody, 80.0%; positivity of rheumatoid factor, 100%; HAQ-DI, 1.35±0.72; DAS28-ESR, 3.61±0.90; detection by sputum culture, 81.8%; NTM species, M. avium; 8 cases and M. intracellulare, 3 cases; bronchiectasis, 90.9%; interstitial pneumonia, 0%; methotrexate use and dosage (mg/week): 63.6% and 7.4±3.4; prednisolone use and dosage (mg/day): 81.8% and 4.3±2.0; biological agent use, 45.5%; and anti-NTM therapy, 36.4%.

Conclusions: At our institute, RA patients complicated with NTM were long-standing, had high disease activities and worse HAQ-DI. In all five patients (45.5%) who were treated with biologics, 3 who had preceding episodes of NTM infection were treated with anti-NTM therapy before treatment with biologics, and the other 2 who had asymptomatic NTM infection after treatment with biologics were not treated with anti-NTM therapy thereafter. In RA patients who are treated with biologics, it is necessary to perform sputum cultures constantly to detect possible NTM infections. This finding is important in the management of RA complicated with NTM.

Disclosure of Interest: None declared


A SYSTEMATIC LITERATURE REVIEW OF OMEGA 3 IN THE TREATMENT OF RHEUMATOID ARTHRITIS

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Background: Many different elements and variables of diet in the management of rheumatoid arthritis (RA) have been studied over the years such as vegan or Mediterranean diets.

Objectives: This systematic literature review covers one food stuff, omega-3 polyunsaturated fats efficacy in the management of RA alongside or independent of conventional DMARD therapy.

Methods: A systematic review of the literature between 1966–2017 was conducted using MEDLINE, CINAHL and EMBASE databases, with key words “RA” and “omega-3” for English-language articles producing 209 hits. We then refined to publications within the last 10 years, giving 96 results. Only including clinical trials gave 12 hits pertaining to 8 trials.

Results: The table above shows a summary of the evidence found. In total, 751 patients with newly diagnosed RA were exposed to omega-3 versus 1733 controls with the smallest study being an RCT involving 13 people and the largest a case-control study with 1569 participants. A notable difference between these studies was the use of DMARD therapy as part of the inclusion or exclusion criteria. Another difference noted was the RA stage eligible for a trial. Some studies required a diagnosis of RA of <12 months whereas most required stable RA ongoing for >12 months.

Conclusions: This review concludes that omega-3 leads to clinical and statistically significant improvements in RA. There was a significant heterogeneity in the trials published with different inclusion criteria especially regarding disease duration and concomitant DMARD therapy. It would seem prudent to include dietary advice in our advice to patients when treating RA. Possible reasons for this evidence would include altering the microbiome.

Disclosure of Interest: None declared

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RAPAMYCIN INDUCES REMISSION IN PATIENTS WITH NEWLY DIAGNOSED RHEUMATOID ARTHRITIS

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Background: Rheumatoid arthritis (RA) is an autoimmune disease characterised by chronic inflammation of the joints. We found that there was an imbalance of Th17 and Treg cells in the patients with active refractory RA, reduced absolute number of Treg cells was found in these patients.

Objectives: To observe the medium-term curative effect of rapamycin in the treatment of 25 cases newly diagnosed rheumatoid arthritis.

Methods: Collecting 25 patients of newly diagnosed rheumatoid arthritis, which accorded with RA diagnosis standard of ACR in 1987. The patients were treated with rapamycin at a dose of 0.5 mg every 2 days for 24 weeks, then we observed the change of clinical improvement and immunological assessments after 24 weeks.

Results: There was 25 patients enrolled. After rapamycin treatment for 24 weeks, the mean DAS28 of them was decreased from 5.36 [1.29] to 3.45 [1.29] (p=0.001). The absolute number of Treg cells was found in these patients.

Conclusions: Rapamycin could induce the balance of Th17 and Treg cells, especially up-regulate the absolute number of Treg cells, thus induce remission in patients with newly diagnosed RA.

Disclosure of Interest: None declared


<table>
<thead>
<tr>
<th>Reference</th>
<th>Study Type</th>
<th>Participants in intervention group</th>
<th>Participants in control group</th>
<th>Omega-3 dose</th>
<th>Duration</th>
<th>Did it show efficacy?</th>
<th>How did they assess response?</th>
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<tr>
<td>Proudmann et al</td>
<td>RCT</td>
<td>86</td>
<td>53</td>
<td>3.7 g/day</td>
<td>1 year</td>
<td>Yes</td>
<td>Success/failure of DMARDs</td>
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<td>Shapiro et al</td>
<td>Case-control</td>
<td>324</td>
<td>1245</td>
<td>&gt;2 servings boiled/baked fish per week</td>
<td>Diet from a year period</td>
<td>Clinical not statistical significance</td>
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<td>Lee et al</td>
<td>Meta-analysis</td>
<td>183</td>
<td>187</td>
<td>&gt;2.7 g/day</td>
<td>&gt;3 months</td>
<td>NSAID consumption, tendon/swollen joint count, physical function</td>
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<td>Bahadori et al</td>
<td>RCT</td>
<td>8</td>
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<td>0.2 g/kg, fish oil emulsion</td>
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<td>Rajaee et al</td>
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<td>3.9 g/day</td>
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<td>Tedeschi et al</td>
<td>Cross sectional analysis</td>
<td>31</td>
<td>145</td>
<td>Eat fish&gt;2 x per week</td>
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<td>48</td>
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<td>Yes in reducing NSAID intake but not in DAS28</td>
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<tr>
<td>Veselinovic et al</td>
<td>RCT</td>
<td>40</td>
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<td>600 mg/day</td>
<td>12 weeks</td>
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<td>Daily NSAID requirement</td>
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