Methods: We extracted population-based longitudinally administered health data for patients 16 years or older with a first diagnosis code of 711.xx (ICD9-CM) and M00.xx (ICD10-AM) in WA in the period 1990-2010. Annual incidence rates (IR), risk factors during 14.5 years follow up and outcomes including standardized mortality rates (SMR) during 10.1 years follow up are reported.

Results: A total of 2,777 patients (67% male, mean age 49.8 ± 20.5) received a first diagnosis code for PyA. The AIR increased from 4.5 to 118/100,000 over time as did age at onset (45.1 to 55.4 years) and proportion of female patients (23 to 36%). There was no seasonal variation in PyA incidence but a higher rate of predisposing comorbidities in female patients. Knees (33.6%) and hands (22%) were most frequently affected with 28.4% of positive cultures not due to G+ cocci. Mean hospital stay was 8 days, 30-day readmimittance and mortality rate was 12.8% and 3.1% respectively. During ten years follow-up serious infections (43%), new diagnosis of osteoarthritis (20%), joint replacement (10.8%), osteomyelitis (6%), and crystal arthropathy (6.3%) were the most common morbidities. SMR were increased across all age and gender categories (Table) but highest in females aged 16-40 (SMR 25.9).

Table 1. Mortality rates (MR) per 1000 person years in patients with pyogenic arthritis compared with age (at death) and gender matched categories from the general population by standardized mortality rate (SMR)

<table>
<thead>
<tr>
<th>Gender</th>
<th>Age</th>
<th>Deaths</th>
<th>Person years</th>
<th>MR PyA</th>
<th>MR Gen pop *</th>
<th>SMR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>16-40</td>
<td>27</td>
<td>4015</td>
<td>6.72</td>
<td>0.892</td>
<td>75.3</td>
</tr>
<tr>
<td></td>
<td>&gt;60</td>
<td>331</td>
<td>7386</td>
<td>44.93</td>
<td>21.55</td>
<td>2.08</td>
</tr>
<tr>
<td></td>
<td>All</td>
<td>438</td>
<td>18487</td>
<td>23.69</td>
<td>5.820</td>
<td>4.07</td>
</tr>
<tr>
<td>Female</td>
<td>16-40</td>
<td>11</td>
<td>1026</td>
<td>10.72</td>
<td>0.41</td>
<td>25.95</td>
</tr>
<tr>
<td></td>
<td>&gt;60</td>
<td>208</td>
<td>4088</td>
<td>50.88</td>
<td>24.20</td>
<td>2.10</td>
</tr>
<tr>
<td></td>
<td>All</td>
<td>259</td>
<td>7883</td>
<td>32.85</td>
<td>5.50</td>
<td>5.96</td>
</tr>
</tbody>
</table>

*Based on WA death data from Australian Bureau of statistics in 2011

Conclusion: The incidence of PyA has increased significantly between 1990 and 2010 in WA. PyA associates with a 3% in-hospital mortality rate and significant joint morbidity including osteomyelitis. PyA associated with excess mortality across age and gender categories, most markedly in younger female patients.

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Acknowledgements: The authors would like to acknowledge the support of the Western Australian Data Linkage Branch, the Western Australian Department of Health, and the data custodians of, the Hospital and Morbidity Data Collection, the Emergency Department Data Collection the WA Cancer Register and the WA Death Register for their assistance with the study.

Disclosure of Interests: None declared

DOI: 10.1136/annrheumdis-2021-eular.1344

EXPOSURE TO DENGUE INFECTION DO NOT RAISE RISK OF RHEUMATOID ARTHRITIS: FINDINGS FROM THE MALAYSIAN EPIDEMIOLOGICAL INVESTIGATION OF RHEUMATOID ARTHRITIS (MYEIRA) CASE-CONTROL STUDY

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Background: Dengue infection is associated with joints pain mimicking disease onset symptom of rheumatoid arthritis (RA). However, there is lack of epidemiological studies on exposure to dengue infection and risk of developing different subsets of RA, defined by the presence of anti-citrullinated peptide antibody (ACPA) in the multi-ethnic Malaysian population.

Methods: Serum samples from 1,235 RA cases (i.e. 516 Malay, 254 Chinese, 145 Indians and 60 others/mixed-ethnicity) and 1,624 epidemiological matched population-based controls (i.e. 1,023 Malay, 208 Chinese, 297 Indians and 96 others/mixed-ethnicity) were assayed for presence of dengue IgG antibody using World Health Organization recommended ELISA kits. Positive results of dengue IgG antibodies indicates previous exposure to dengue infection(s). We performed chi-square and Mann-Whitney U analysis to determine the association of ever-exposed dengue infection with ACPA-positive/ACPA-negative RA and to investigate the antibody frequency and levels among the studied populations.

Results: We observed high occurrence of dengue IgG antibody in the overall RA cases (79.7%) and matched controls (77.3%), with no significant differences detected between the ACPA subsets of RA. Ethnicity stratification analysis revealed a decrease risk of developing ACPA-positive RA in the Indian patients with positive dengue IgG antibody (OR=0.59, 95% CI=0.37-0.94, p=0.03), and in particular patients with elevated level of dengue IgG antibody (OR=0.44, 95% CI=0.25-0.78, p=0.05). On the other hand, the significant difference mean levels of dengue IgG antibody were observed in the ACPA-positive RA subset for all three major ethnic groups (i.e. Malay, p<0.0001, Chinese, p<0.01 and Indian<0.05) (Figure 1). No association was observed between presence of dengue IgG antibody and ACPA-negative RA subset.

Conclusion: Our findings demonstrated that exposure to dengue infection do not increase the risk of developing future RA in the multi-ethnic Malaysian population. The inverse associations observed in the Indian ethnic group are in line with the other studies investigating exposure to viral infection and risk of RA.

REFERENCES:

Acknowledgements: The authors would like to thank the Director General of Health, Ministry of Health Malaysia for supporting this study. The authors are also indebted to participants for their kind participation. This study was financially supported by the Ministry of Health, Malaysia (JPP-IMR 17-025) and the short-term research grant by UnikL RCMP (sr16037).

Disclosure of Interests: None declared

DOI: 10.1136/annrheumdis-2021-eular.1684

LISTERIA MONOCYTOGENES. DESCRIPTION AND ANALYSIS OF CASES IN AN IMMUNODEPRESSED POPULATION BY RHEUMATIC DISEASES

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Background: Listeria monocytogenes is a gram-positive bacteria that cause the invasive disease listeriosis. Human clinical syndromes are infrequent, mostly appearing in immunosuppressed individuals, newborns, the elderly, pregnant women, and occasionally healthy patients.

OP0097

Figure 1. Comparison of mean dengue IgG antibody level between ever-exposed dengue infection RA cases, stratified by ACPA status. Comparison of median dengue IgG antibody level between the ever-exposed dengue infection ACPA-positive RA and normal controls in the four ethnic groups. The red line indicates the mean level of dengue IgG antibody level

Conclusion: The incidence of PyA has increased significantly between 1990 and 2010 in WA. PyA associates with a 3% in-hospital mortality rate and significant joint morbidity including osteomyelitis. PyA associated with excess mortality across age and gender categories, most markedly in younger female patients.

Disclosure of Interests: None declared

DOI: 10.1136/annrheumdis-2021-eular.1344
Rheumatoid arthritis - morbidity and clinical aspects - I*

**OP0098**

**POLYPHARMACY IS ASSOCIATED WITH A POORER TREATMENT RESPONSE AND INCREASED RISK OF ADVERSE EVENTS IN EARLY RHEUMATOID ARTHRITIS**

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**Background:** Polypharmacy is steadily increasing in patients with rheumatoid arthritis (RA). They may interfere with treatment response and the occurrence of serious adverse events. Medications taken by a patient may reflect active comorbidities, whereas comorbidity indices usually include past or current diseases. Biological DMARDs (1 Adalimumab, 1 Infliximab and 1 Rituximab) As a result of the listeria infection, most of them had fever or digestive symptoms and two of them experienced neurological manifestations (meningoencephalitis) None of these last two (with lupus and RA) had biological DMARDs.

**Conclusion:** Listeriosis is an uncommon but potentially serious infection usually in older people, pregnant women and immunocompromised patients. In our sample, 33% of the patients were immunocompromised. Of the 9 patients affected by listeria with rheumatoid disease we find a death for meningoencephalitis. Given the impact of this infection in immunosuppressed patients should pay attention in our patients with fever and neurological manifestations.

**REFERENCE:**

**Disclosure of Interest:** None declared. DOI: 10.1136/annrheumdis-2021-eular.4282