Methods: We extracted population-based longitudinally linked administrative health data for patients 16 years or older with a first diagnostic code of 711.xx (ICD9-CM) and M00.xx (ICD10-AM) in WA during the period 1990-2010. Annual incidence rates (IR) and risk factors during 14.5 years lookback and outcomes including standardized mortality ratios (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 diagnostic code for PyA. The AIR increased from 4.5 to 11.8/100,000 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 readmittance and mortality rate was 12.8% and 3.1% respectively. During 8 years follow-up severe infections (43%), new diagnosis of osteoarthritis (20%), joint replacement (10.6%), 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 and 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 yrs</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>7.53</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>
</tbody>
</table>

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.

REFERENCES:

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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
Objectives: We describe and analyze Listeria-related demographics and clinical features to determine the predisposing conditions for severe infections in an immunodepressed population by rheumatic diseases.

Methods: Descriptive Observation Study. A retrospective analysis of 143 patients were performed affected by listeriosis, with positive isolation of Listeria monocytogenes from blood, treated in the H.U. Virgen del Rocío (Seville-Spain) between 2003-2019. Of them 9 were rheumatoid patients. The type of clinical manifestation was analyzed, paying special attention to the characteristics associated with patients with neurological complications or unfavorable outcome (death and/or abortion in pregnant women), immunosuppression (associated with cancer or rheumatic disease) was assessed as independent variables, chronic diseases (Hypertension, Diabetes Mellitus, dyslipidemia, COPD, Renal Insufficiency and Ischemic Heart Disease) as well as other baseline characteristics of the patient. (age, sex, pregnancy) and their toxic habits (tobacco and alcohol).

Results: The sample includes a similar proportion of men (70 cases) and women (73 cases), of all ages. Of the total patients, most (85%) required hospital admission, with a duration median (non-parametric data) of 11 days. 78% of the cases admitted showed a favorable evolution. However, 15.4% resulted in death and 6.6% in abortion. This percentage of abortions represented 29% of the total pregnant women admitted. Of all the patients admitted, a third (33%) were immunocompromised, including patients with cancer (79%) and rheumatic diseases (21%). Include lupus (33%), RA (22%), APS (11%), polymyalgia rheumatica (11%), panuveitis (11%) and ANCA vasculitis MPO specificity (11%). All of them required admission although the majority showed a favorable evolution, except one of the patient, which resulted in death, in which case in addition to lupus he presented with prostate cancer. Regarding the baseline treatment of these patients, 7 underwent treatment with synthetic DMARDs and three with 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 rheumatic disease we find a death for meningencephalitis. Given the impact of this infection in immunocompromised patients should pay attention in our patients with fever and neurological manifestations.

REFERENCE:

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Rheumatoid arthritis - comorbidities and clinical aspects - I

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 used include past or current comorbidities.

Objectives: To evaluate whether polypharmacy is associated with treatment response and adverse events in an early RA cohort and to establish whether polypharmacy could represent a substitute of comorbidities.

Methods: We used data from the French cohort ESPOIR, including 813 patients with early onset arthritis. Patients included the current study had to start their first disease modifying anti-rheumatic drug (DMARD) within 24 months of inclusion in the cohort. Disease activity data were collected at one, five and ten years from the initiation of the first DMARD. For each patient, treatments were collected at baseline and at five years. Medications count included all specialties other than background RA therapy, analgesics/NSAIDs and topicals. Polypharmacy was defined as a categorical variable based on the median and tertiles of distribution in the cohort. Treatment response was assessed by achieving DAS28 ESR remission (REM) at 1 year, 5 years and 10 years from the initiation of the first DMARD. The occurrence of severe adverse events (SAE) was measured by the occurrence of severe infection, hospitalization, or death during the 10-year follow-up. The association between patient’s characteristics and achievement of REM and occurrence of SAE were tested in univariate analysis. A logistic regression model was used to evaluate associations between polypharmacy and REM at 1 year, 5 years and 10 years (we used baseline polypharmacy for the 1-year analysis and five years polypharmacy for the 5- and 10-years analyses). Multivariate adjustment was made for age, sex, BMI, duration of disease, initial DAS28 ESR, initial HAQ, smoking status, rheumatic disease comorbidity index (RDCI).

Results: The proportion of patients who achieved REM one year after the initiation of the first DMARD was 32.1% in the polypharmacy according to the median group (patients taken ≥2 medication) versus 67.9% in the non-polypharmacy group (p = 0.07). At 5 years after the first DMARD, the proportion of patients with REM was 45.0% in the polypharmacy group versus 56.3% in the non-polypharmacy group (p = 0.03). At 10 years the proportion of patients with REM was 32.5% in the polypharmacy group versus 67.5% (p = 0.06). Patients who take greater or equal to 2 medications had a 40% lower probability of achieving REM (OR = 0.60 [0.38-0.94] p = 0.03) at 5 years from the first DMARD if (RDCI index was not included in the model). At 10 years, patients receiving multiple medications had a 43% lower probability of achieving REM (OR = 0.57 [0.34-0.94] p = 0.02). SAE incidence was 61 per 1000 patient-years. For patients who developed SAE all causes 71.4% where in the polypharmacy group versus 57.8% were in the non-polypharmacy group (p = 0.03; univariate analysis). These results are no longer significant after adjustment for comorbidities indices.

Conclusion: In this early RA cohort, polypharmacy is associated with a poorer treatment response and increased risk of adverse events. Polypharmacy may represent a good substitute of comorbidities for epidemiological studies.

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EPILOGUE AND MORTALITY OF RA-ASSOCIATED INTERSTITIAL LUNG DISEASE: DATA FROM A FRENCH ADMINISTRATIVE HEALTHCARE DATABASE

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