Abstract OP0227 – Table 2 Association between glucocorticoids and methotrexate with post-operative hospitalised infection among abatacept treated patients, logistic regression model

<table>
<thead>
<tr>
<th>Average glucocorticoid dose</th>
<th>Adjusted OR (95% CI)</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>None (n = 764)</td>
<td>Reference</td>
<td></td>
</tr>
<tr>
<td>&lt;5 mg (n = 454)</td>
<td>1.32 (0.88-1.98)</td>
<td>0.18</td>
</tr>
<tr>
<td>≥5 mg (n = 230)</td>
<td>2.45 (1.63-3.73)</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>≥10 mg (n = 87)</td>
<td>3.73 (1.94-7.16)</td>
<td>0.002</td>
</tr>
<tr>
<td>Methotrexate use (n = 178)</td>
<td>1.97 (0.95-4.08)</td>
<td>0.06</td>
</tr>
</tbody>
</table>

Inflated in the reduced multivariable model but not shown: duration of surgery, age, disability, sex, race, marital household income, surgery type, chronic kidney disease, surgery volume. Tested but excluded (p > 0.2): comorbidities, diabetes, creatinine heart failure, asthma/COVID-19, ethnicity, Charlson score, previous biologics, hospitalisations, hospitalised infections, number outpatient visits, hospital volume, sliced nursing facility residence, extra-articular RA, region, urban, antibody/white blood counts/p90 day 30, year.

Conclusions: Holding intravenous abatacept for ≥4 weeks (one dosing interval) was not associated with a lower risk of hospitalised infection, prosthetic joint infection, or 30 day readmission. Glucocorticoid use even at 5–10 mg per day was associated with significantly greater risk of post-operative infection.

REFERENCE:

Disclosure of Interest: M. George1, J. Baker1, K. Winthrop1, E. Alemao2, L. Chen3, S. Connolly2, T. Simon3, O. Wu4, F. Xie5, S. Yang6, None declared, J. Curtis Grant1, research support from: Pfizer, Amgen, UCB, Myriad genetics, Bristol Myers Squibb, Consultant for: Pfizer, Amgen, UCB, Myriad genetics, Bristol Myers Squibb, Janssen

COMPARATIVE RISK OF BIOLOGIC THERAPIES AND RISK OF GLUCOCORTICOIDS IN PATIENTS WITH RHEUMATOID ARTHRITIS UNDERGOING ELECTIVE ARTHROPLASTY

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Background: Patients with RA undergoing major surgery are at high risk for infection. Different biologic DMARDs may be associated with different infection risks.1

Objectives: Goals were 1) to compare post-operative infection risk after arthroplasty in patients with RA exposed to different biologics, and 2) examine associations between glucocorticoid use and post-operative infection.

Methods: A retrospective cohort study using U.S. Medicare data from 2006-Sep-2015 evaluated adults with ≥2 ICD9 codes for RA undergoing elective inpatient primary or revision total knee or hip arthroplasty. Eligible patients received an infusion or prescription for abatacept, adalimumab, etanercept, infliximab, or tocilizumab within 8 weeks or a rituximab infusion within 16 weeks of surgery. Patients with hip fracture, malignancy, pre-existing infection, or non-elective surgery were excluded. Average glucocorticoid dose in the 3 months before surgery was calculated from oral prescriptions. Logistic or Cox regression evaluated associations between glucocorticoid dose and outcomes in the same cohort, using inverse probability weighting. Similar analyses were used to evaluate associations between biologic exposure and post-operative outcomes: 1) hospitalisation infection among patients with discharge to home, rehabilitation facility, or skilled nursing facility, or hospitalised infection. Incidence per 100 person-years. Bold values are statistically significant with p < 0.05.

Conclusions: Risk of hospitalised infection, prosthetic joint infection, and readmission after arthroplasty was similar in patients with RA treated with different biologics. In contrast, glucocorticoid use, especially >10 mg/day, was associated with greater risk of hospitalised infection and PJI.

REFERENCE:
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THE ASSOCIATION OF BIOLOGIC DRUG-LEVELS WITH INFECTION RISK: RESULTS FROM THE BRITISH SOCIETY FOR RHEUMATOLOGY BIOLOGICS REGISTER FOR RHEUMATOID ARTHRITIS

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Background: High dose tumour necrosis factor inhibitor (TNFi) drugs are associated with increased serious infection (SI) risk. It is feasible that high biologic levels predict dose-dependent adverse events such as SI. No registries have systematically evaluated the effect of drug levels on infection risk.

Objectives: To assess the effect of biologic drug levels in rheumatoid arthritis (RA) patients on (i) all infections (AI) (ii) SI infections requiring hospitalisation, IA biologics or lead to death

Conclusions: Risk of hospitalised infection, prosthetic joint infection, and readmission after arthroplasty was similar in patients with RA treated with different biologics. In contrast, glucocorticoid use, especially >10 mg/day, was associated with greater risk of hospitalised infection and PJI.