96. Corticosteroid Utilization and Risk of Infections Among Rheumatoid Arthritis Patients Taking Biologic and Non-Biologic Disease Modifying Antirheumatic Drugs with and without Corticosteroids

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Background: Rheumatoid arthritis (RA) patients failing non-biologic disease modifying antirheumatic drugs (nbDMARDs) may undergo Tumor Necrosis Factor inhibitors (TNFi) therapy and/or use corticosteroid concomitantly.

Objectives: Using Quebec health services administrative data, we examined corticosteroid use and rates of infection-related emergency department (ED) visits and/or hospitalizations among RA patients receiving TNFi, nbDMARDs, and a combination of TNFi and nbDMARDs with/without corticosteroids.

Methods: We constructed an age (≥20 years), sex, calendar time (2002–2011) and high-dimensional propensity score matched RA cohort of TNFi versus nbDMARD users. Patients with infections in the prior three months were excluded. Patients were followed to the first date of death, infection occurrence or March 2012. Corticosteroid use at cohort entry was examined and time to interruption was assessed using COX models. Time-dependent Cox models were used to assess adjusted hazards ratios (HR) of infections for TNFi and nbDMARDs use with/without corticosteroid.

Results: At cohort entry, 359 patients were in the TNFi, 544 in the TNFi + nbDMARDs, and 1,712 in the nbDMARD groups. Among these 37%, 39% and 34% were using corticosteroid, and 72%, 65% and 60% used corticosteroid in follow-up, respectively. Among corticosteroid users at cohort entry, TNFi users were 38% more likely to interrupt it during follow-up (HR 1.38; 95% confidence interval, CI 1.01, 1.90). Compared to time on nbDMARD (no corticosteroid), the HR of infections were as follows: TNFi 1.73 (1.18, 2.55), TNFi + nbDMARD 2.27 (1.62, 3.19), nbDMARDs + corticosteroid 3.13 (2.38, 4.14), TNFi + corticosteroid 5.69 (3.53, 9.16), TNFi + nbDMARDs + corticosteroid 3.84 (2.45, 6.03). Similar results were seen when we separately considered infection-related hospitalizations.

Conclusions: RA patients using corticosteroid had high rates of infections whether they were on nbDMARDs or TNFi. The rates of infections were higher among users of TNFi with/without nbDMARDs compared to users nbDMARDs alone.

97. Safety of Anti-Vascular Endothelial Growth Factor (anti-VEGF) Intravitreal Injections for the Treatment of Patients with Age-Related Macular Degeneration (AMD)

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Background: AMD is the leading cause of blindness among Americans over 40 years of age. The use of anti-VEGF agents has dramatically changed the management of neovascular AMD, but there is a paucity of real-world safety data.

Objectives: To determine the risk of adverse events related to intravitreal anti-VEGF in patients with neovascular AMD.

Methods: We used MarketScan® databases (2011–2014) to study adult individuals with AMD. Cohort entry was the date of the first diagnosis. Anti-VEGF (bevacizumab, ranibizumab, pegaptanib, and aflibercept) use was modeled as time-dependent indicator of current use (from the date of injection and 90 days onward) and non-use. Primary outcomes included ocular events: endophthalmitis, rhegmatogenous retinal detachment, retinal tear, uveitis, and vitreous hemorrhage. Secondary outcomes included systemic events: cerebrovascular accident, myocardial infarction, deep vein thrombosis, and pulmonary embolism. Incidence rates were calculated for each exposure group. Cox regression models were performed to evaluate the effect of current exposure on primary and secondary outcomes. The models were adjusted for baseline covariates: age, sex, place of residence (urban versus rural), socioeconomic status, co-morbidities and drug use (ACEIs, ARBs, statins, clopidogrel, warfarin, aggrenox, and low-molecular-weight heparin – LMWH).