Medical or Research Professionals/Clinicians

Topic area: Clinical topics by disease

Topic: 19. Spondyloarthritis - treatment

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DO TNF INHIBITORS IMPACT THE COMORBIDITIES AND EXTRA-ARTICULAR MANIFESTATIONS, AND THEREBY ALTER THE NATURAL HISTORY OF ANKYLOSING SPONDYLITIS?

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My abstract has been or will be presented at a scientific meeting during a 12 months period prior to EULAR 2018: No

Is the first author applying for a travel bursary and/or an award for undergraduate medical students?: No

Background: Anti-tumour necrosis factor (anti-TNF) treatment has led to reduction in signs and symptoms, and improvements in physical function and quality of life in ankylosing spondylitis (AS) patients (pts). Whether anti-TNFs impact the incidence of AS-related comorbidities and extra-articular manifestations (EAMs) is not known.

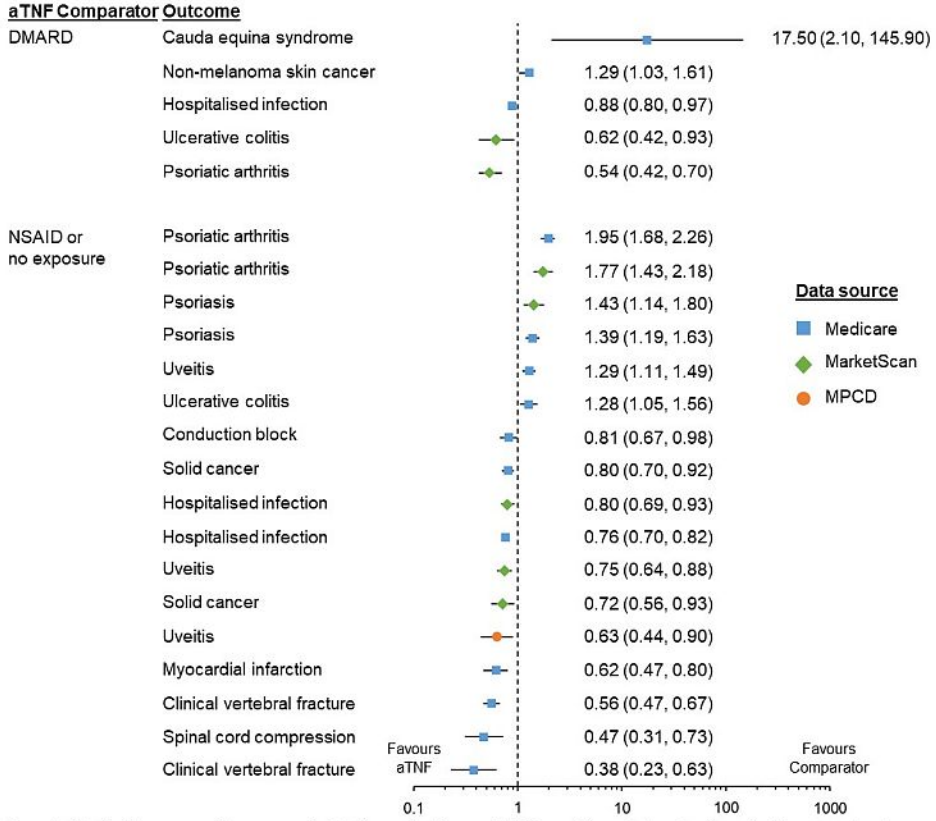
Objectives: To evaluate the incidence and prevalence of AS-related comorbidities and EAMs in AS pts in the US.

Methods: This was a retrospective cohort study of 3 commercial insurance claims databases (Multi-Payer Claims Database [MPCD 2007–2010], Truven MarketScan [2010–2014], and US Medicare Fee-for-Service Claims [2006–2014]) to evaluate EAMs (uveitis, psoriasis, inflammatory bowel disease) and physician-diagnosed comorbidities (cardiac, renal, pulmonary, neurologic) in AS pts diagnosed by a rheumatologist (index date), having 6 months' baseline data prior to the index date, and drug-specific exposures after AS diagnosis (ICD-9 720.0). Three mutually exclusive hierarchical exposure groups were examined (low to high): (1) no therapy or prescription NSAIDs; (2) conventional DMARDs; (3) anti-TNFs. Prevalence of comorbidities was ascertained in a 12-month period (6 months pre- and post-index date). Incidence of comorbidities and EAMs was assessed during the period between treatment initiation and the earliest of death, loss of medical coverage, end of study, first outcome occurrence, treatment discontinuation or initiation of therapy at a higher level in exposure hierarchy. Pts with a history of prior events (except infections) were excluded from the incidence assessment for that event. Hazard ratios comparing anti-TNFs vs DMARDs and NSAIDs/no therapy were estimated using inverse probability treatment weighted Cox proportional hazards models.

Results: A total of 37,566 AS pts were included. Prevalence of AS in the MPCD population was 0.26% and in the Medicare population was 1.21%. As expected, comorbidities were more common in Medicare AS pts vs those in MPCD or MarketScan databases in all exposure groups. The propensity score-weighted incidences of solid cancers, myocardial infarction, conduction block, cord compression and vertebral fractures were lower in anti-TNF treated pts vs those treated with NSAIDs or DMARDs alone, although anti-TNF treated Medicare pts had a higher incidence of EAMs such as psoriatic arthritis, uveitis and ulcerative colitis **(Figure)**.

Image/graph:

Figure: Propensity score-weighted hazard ratios of physician-diagnosed outcomes and EAMs by treatment exposures



Forest plot depicts propensity score-weighted hazard ratios and 95% confidence intervals. Non-significant contrasts and zero-incident events are not shown. aTNF: anti-TNF; DMARD: disease modifying anti-rheumatic drug; EAMs: extra-articular manifestations; MPCD: multi-payer claims database; NSAID: non-steroidal anti-inflammatory drug.

Conclusions: This investigation of the prevalence and incidence of comorbidities and EAMs of AS in US pts suggests that anti-TNF use is associated with a lower incidence of some comorbidities, and a trend of higher incidence of EAMs, which may reflect channelling of more severe AS pts to anti-TNFs. Although results vary somewhat by data source and may be explained by different baseline characteristics (e.g. Medicare pts were older), our results suggest that anti-TNF use is associated with lower incidence of those comorbidities that confer substantial morbidity in AS.

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