SAT0399

EFFECT OF DISEASE-MODIFYING ANTI-RHEUMATIC DRUGS ON BONE STRUCTURE AND STRENGTH IN PSORIATIC ARTHRITIS PATIENTS

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Background: In contrast to rheumatoid arthritis, little is known about the effect of disease modifying anti-rheumatic drugs (DMARDs) on bone structure and bone biomechanics in psoriatic arthritis (PsA).

Objectives: To address whether the use of methotrexate (MTX) and biological DMARDs (bDMARDs) impacts bone structure and biomechanical properties in PsA patients.

Methods: Cross-sectional study in PsA patients receiving no DMARDs, MTX or bDMARDs. Volumetric bone densities (vBMD), microstructural parameters and biomechanical properties (stiffness/failure load) were determined by high-resolution peripheral quantitative computed tomography (HR-pQCT) and micro-finite element analysis. Bone parameters were compared between PsA patients with no DMARDs and those receiving any DMARDs, MTX or bDMARDs, respectively.

Results: 165 PsA patients were analyzed, 79 received no DMARDs, 86 received DMARDs, of them 52 bDMARDs (TNF, IL-17- or IL-12/23 inhibitors) and 34 MTX. Groups were balanced for age, sex, comorbidities, functional index and bone-active therapy, while disease duration was longest in the bDMARDs group (7.8±7.4 years), followed by the MTX group (4.6±7.4) and the no-DMARD group (2.9±5.2). No difference in bone parameters was found between the no-DMARD group and the MTX group. In contrast, the bDMARDs group revealed significantly higher total (p=0.001) and trabecular vBMD (p=0.005) as well as failure load (p=0.012) and stiffness (p=0.012). In regression models age and bDMARDs influenced total vBMD, while age, sex and bDMARDs influenced failure load and stiffness.

Conclusion: Despite longer disease duration bDMARDs treated PsA patients benefit from higher bone mass and better bone strength than PsA patients receiving MTX or no DMARDs. These data support the concept of better control of PsA-related bone disease by bDMARDs.

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SAT0400

REAL-WORLD SWITCH RATES AMONG BIOLOGIC-NAIVE PSORIATIC ARTHRITIS PATIENTS INITIATING APREMILAST, TUMOR NECROSIS FACTOR INHIBITORS OR INTERLEUKIN INHIBITORS

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Background: Psoriatic arthritis (PsA), an inflammatory arthritis, manifests in joints and surrounding tendons and ligaments.¹ As PsA progresses, patients may switch from 1 therapy to another, discontinue medication or use agents in combination. Previous real-world studies have demonstrated that treatment persistence and adherence rates for biologic-naïve PsA patients initiating apremilast or biologics (ie, tumor necrosis factor [TNF] and interleukin [IL] inhibitors) are not different.^{2,3} Treatment switching is common among PsA patients.

Objectives: This study compares the rate of treatment switching among adult patients initiating treatment with apremilast, TNF inhibitor or IL inhibitors.

Methods: Adult patients with PsA were identified if they newly initiated treatment with apremilast, a TNF inhibitor (adalimumab, certolizumab, etanercept, golimumab, infliximab) or an IL inhibitor (ixekizumab, secukinumab, ustekinumab) between January 1, 2015, and December 31, 2016, and had a minimum of 12 months pre-index and post-index continuous enrollment in the Truven Health (now IBM Watson) MarketScan® Commercial and Medicare Supplemental Database. Propensity score matching, based on available demographic and clinical characteristics, up to 1:2, was utilized between apremilast and biologic patients. Switch was defined as a claim for a new PsA treatment after initiation of the index medication. Days to switch was defined as the number of days between the index date and date of switch. Adherence was assessed utilizing the proportion of days covered (PDC). Outcomes were assessed every 3 months, up to 24 months. T-test, Wilcoxon rank-sum test and chi-squared test were used to evaluate differences between cohorts for continuous and categorical variables, as appropriate.

Results: 471 biologic-naïve PsA patients initiating apremilast were matched to 890 biologic-naïve PsA patients initiating biologics (TNF: n=804; IL: n=86). Patient characteristics were similar between the 3 cohorts (mean age: 50 years; Charlson Comorbidity Index: 0.58 [apremilast], 0.55 [TNF] and 0.56 [IL]). There was a greater proportion of females in the apremilast vs IL cohorts (55% vs 42%; P=0.0249) and a lower proportion of patients with prior PsA systemic treatment (59% vs 79%; P=0.0046). In the TNF cohort, 64% patients received adalimumab, 29% etanercept, 4% infliximab, 2% certolizumab and 1% golimumab. In the IL cohort, 78% of patients received ustekinumab, 21% secukinumab and 1% ixekizumab. At 12 months, significantly fewer patients initiating apremilast switched treatment compared with those initiating TNF inhibitors (15.5% vs 26.6%; P<0.0001), while no significant differences were observed for apremilast vs IL patients (15.5% vs 14%; P=0.714). Similar switching trends were observed at 24 months for patients initiating apremilast vs TNF (25.0% vs 36.5%; P=0.0109) or those initiating apremilast vs IL (25.0% vs 26.7%; P=0.8465). Among those switching by 12 months, mean days to switch was similar between apremilast and TNF patients (199 vs 200 days; P=0.9759) and apremilast and IL patients (199 vs 227 days; P=0.3602). Patients initiating apremilast had a similar treatment adherence rate as patients initiating a TNF inhibitor (PDC: 0.81 vs 0.84; P=0.0749) and a higher treatment adherence rate than patients initiating an IL inhibitor (0.81 vs 0.76; P=0.0071).

Conclusion: Biologic-naïve PsA patients initiating apremilast demonstrated lower switch rates vs biologic-naïve PsA patients initiating TNF inhibitors in a large US administrative claims database. No difference in rates of switching was observed between apremilast and IL patients.

REFERENCE

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SAT0401

USE OF AND RESPONSE TO METHOTREXATE IN EARLY PSORIATIC ARTHRITIS: RESULTS FROM THE REAL WORLD COHORT, DEPAR STUDY

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Background: Methotrexate (MTX) is the preferred drug of most rheumatologists for treating psoriatic arthritis (PsA). Despite its widespread use in