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## SAT0438 REAL-WORLD TREATMENT PERSISTENCE WITH BIOLOGIC DISEASE MODIFYING ANTIRHEUMATIC DRUGS AMONG GERMAN PATIENTS WITH PSORIATIC ARTHRITIS

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**Background:** Persistence rates of biologic disease modifying antirheumatic drugs (bDMARDs), which refer to the duration of time from initiation to discontinuation or switch of therapy, have been shown to vary considerably depending on the country, types of health centers, as well as the specific drug being investigated. Evidence on treatment persistence of psoriatic arthritis (PsA) patients in Germany is scarce.
**Objectives:** Our aim was to study drug survival of bDMARDs in a German real-world cohort of adult biologic-naïve psoriatic arthritis patients.
**Methods:** We utilized the German "Institut für angewandte Gesundheitsforschung Berlin" (InGef) research database consisting of about 4 million covered lives structured to represent the German population in terms of age and gender according to the Federal Office of Statistics (DESTATIS). Thereof, 2.9 million patients were continuously enrolled in the study period spanning from January 1st, 2013 and December 31st, 2018. For the analysis of persistence rates, the study population was identified based on the International Classification of Diseases, German Modification (ICD-10-GM) and claims records of biologic prescriptions based on ATC codes. Adult patients who had a diagnosis of psoriasis arthritis (L40.5 in combination with M07.0 or M07.1 or M07.2 or M07.3) in the inpatient or outpatient setting, and a claims record of biologic treatment licensed for psoriasis arthritis between January 1st, 2014 to December 31st, 2017 were included. Patients with Crohn's disease (K50), ulcerative colitis (K51), ankylosing spondylitis (M45), and rheumatoid arthritis (M05-M07) were excluded. Biologic-naïve patients were identified as those who had no prior record of bDMARDs prescription during the 12 months before the index date ('washout'). The index date was defined as the first claim for a biologic agent. Non-persistence occurred if a treatment gap exceeding the days of supply plus 60 days or a switch to a bDMARD other than the index therapy was observed. Days of supply were calculated based on the daily defined doses defined by the WHO for the respective bDMARDs. Kaplan-Meier curves were plotted to show the persistence of different biologics. The log-rank test was used to test for differences in the 1-year persistence rate.
**Results:** Among 10,954 patients with a diagnosis of PsA, 348 biologic-naïve patients aged 18 years or above were identified. The one-year overall persistence rate was 57.5% for all bDMARD compounds. Reasons for non-persistence were switches to a different bDMARD agent in 15.8% of patients and 26.7% discontinued treatment. The highest persistence rate was observed for ustekinumab (81.3%), which was significantly higher than the respective rates for adalimumab (58.1%), certolizumab pegol (51.7%), etanercept (51.0%), or secukinumab (54.7%).
**Conclusion:** Persistent rates for a real-world cohort of German PsA patients are modest with significant variations among different bDMARD therapies.
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## SAT0439 POWER DOPPLER ULTRASOUND ASSESSMENT OF A1 PULLEY. A NEW TARGET IN PSORIATIC ARTHRITIS?

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**Background:** In the last few years annular pulleys inflammation has been highlighted as a possible key pathogenetic factor in psoriatic dactylitis, first with magnetic resonance imaging (MRI)[1], then, in a very recent paper[2], with power Doppler (PD) ultrasound (US). However, the prevalence of PD US inflammation of annular pulleys in psoriatic arthritis (PsA) patients compared to rheumatoid arthritis (RA) patients has not been investigated yet.
**Objectives:** To determine the prevalence of PD US findings indicative of A1 pulley inflammation in PsA patients and in controls with RA and to preliminarily investigate the correlation between A1 pulley inflammation and disease activity (DAPSA).
**Methods:** Consecutive patients with PsA and RA were included in this cross-sectional single-centre study. A rheumatologist recorded demographic and clinical data and in the same day another rheumatologist performed the US examination using a MyLab ClassC (Esaote, Genova, Italy) equipped with a 10-22 MHz linear probe. A1 pulleys of fingers 2nd to 5th were assessed bilaterally adopting longitudinal and transverse scans. The following pathological US findings were recorded: inflammation of the pulley (defined as the presence of PD signal within a thickened pulley) and tenosynovitis of the digital flexor tendons at finger level according to OMERACT definition.
**Results:** Sixty patients were enrolled: 30 with PsA and 30 with RA. Inflammation of A1 pulley was found in 15 out 240 fingers (6.3%) of 8 (26.7%) PsA patients and in 1 out of 240 fingers (0.4%) of 1 (3.3%) RA patients ($p<0.01$ and $p=0.03$ respectively). Both pulley inflammation and tenosynovitis were correlated with DAPSA (Rpb=0.56, $p<0.01$ and Rpb=0.48, $p<0.01$). In fact, 7 out 8 (88%) PsA patients with at least one inflamed A1 pulley had a moderate/high disease activity score. The regression linear analysis (R2=0.36, adjusted R2=0.31) showed that A1 pulley inflammation was correlated with higher DAPSA scores ($\beta=0.43$, $p=0.03$). No significant association was reported between A1 pulley inflammation and past or current episodes of dactylitis ($p=0.09$). However, the only current dactylitis assessed showed A1 pulley inflammation.
**Conclusion:** This pilot study demonstrated that ultrasound A1 pulley inflammation, defined as the presence of power Doppler signal within a thickened pulley, is relatively common at patient level in psoriatic arthritis and seems to be characteristic of PsA compared to RA. In psoriatic arthritis patients, a positive significant correlation was found between ultrasound A1 pulley inflammation and disease activity.
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## SAT0440 METHOTREXATE SURVIVAL RATE IN PATIENTS WITH PSORIATIC ARTHRITIS FROM PSORIATIC ARTHRITIS –INTERNATIONAL DATABASE (PSART-ID) COHORT

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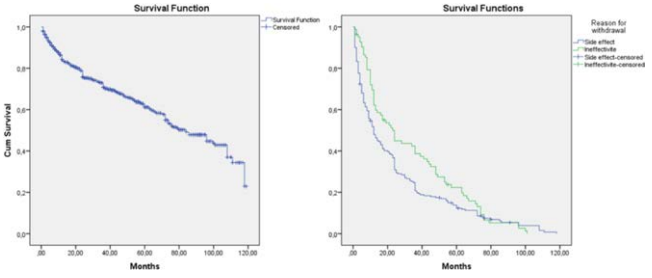
**Background:** Methotrexate (MTX) is the most common first-line disease-modified anti-rheumatic drugs in psoriatic arthritis (PsA), despite the controversies.
**Objectives:** In this study, we aimed to determine the rate of withdrawal rate of MTX in PsA and reasons for discontinuing.
**Objectives:** In this study, we aimed to determine the rate of withdrawal rate of MTX in PsA and reasons for discontinuing.
**Methods:** A large prospective international multicenter PsA registry was used for this study. Data were collected either at enrolment, based on history, or prospectively if there was a follow up. We analyzed the frequency of MTX usage, discontinuation and the reason for discontinuation. The time on MTX was compared according to the reason of discontinuation (inefficacy vs side effects) using Kaplan-Meier and Cox regression analyses to identify risk factors for discontinuation.
**Results:** At the time of analyses, 1670 patients had been recruited to the registry and 1359 PsA patients had used MTX during the course of the disease (81.3%). Within these, 942 (69.3%) were still on MTX at the time of analysis, and 417 (30.7%) patients have discontinued (Table). The most common reasons for withdrawal were side effects (219/417, 52.5%) and ineffectiveness (88/417, 21.1%). Other reasons included pregnancy, remission, self-decision (11.9% for all). For 60 patients (14.3%), the reason could not be identified. In patients who were still on MTX, the median duration of MTX therapy was 31 months (IQR=59) compared to 17 months (IQR=43) in the withdrawal group. The most common side effects were gastrointestinal symptoms (47%) and abnormal liver function tests (25%). There was a significant difference in survival plots (Log-rank p=0.026) with discontinuing due to side effects occurring earlier than inefficacy (Figure 1). In cox regression model, longer disease duration was found as an independent predictor of MTX discontinuation due to all reasons [Hazard Ratio (HR)=1.01, 95% Confidence interval (CI)=1.0-1.02; p=0.003].
**Conclusion:** MTX is frequently used on PsA treatment, despite the controversies in the literature. One third of patients with PsA discontinue MTX, most commonly due to side effects or inefficacy. Patients discontinue MTX earlier in case of having side effects. Longer disease duration is linked to MTX discontinuation.

**Table. Demographics and disease characteristics of study groups**

| | All patients n=1359 | Still on MTX n=942 | Withdrawal MTX any reason n=417 | p |
|---|---|---|---|---|
| Age, mean (SD) | 46.4 (13.4) | 46.1 (13.4) | 47.7 (14.0) | **0.038** |
| Male gender, n (%) | 523 (38.5) | 360 (38.2) | 163 (39.1) | 0.761 |
| Ever smoking, n (%) | 569/1258 (46.2) | 390/861 (45.3) | 179/397 (45.1) | 0.966 |
| Psoriasis duration (years), mean (SD) | 14.2 (11.7) | 14.0 (11.2) | 16.4 (12.7) | **0.003** |
| Polyarthritis, n (%) | 657/1343 (48.9) | 471/931 (50.6) | 186/412 (45.1) | 0.066 |
| Axial disease, n (%) | 388/1343 (28.9) | 267/931 (28.7) | 121/412 (29.4) | 0.797 |
| Nail involvement (ever), n (%) | 644 (47.8) | 435 (46.6) | 209 (50.5) | 0.191 |
| Swollen Joint Count, mean (SD) | 1.5 (2.6) | 1.4 (2.6) | 2.0 (3.2) | **<0.001** |
| Tender Joint Count, mean (SD) | 3.0 (4.4) | 3.5 (5.0) | 4.2 (5.4) | **<0.001** |
| HAQ, mean (SD) | 0.6 (0.6) | 0.7 (0.7) | 0.8 (0.7) | **0.035** |
| BASDAI,mean (SD) | 37 (22) | 39 (23) | 46 (25) | **0.001** |

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## SAT0441 BODY COMPOSITION AND FAT DISTRIBUTION IN PATIENTS WITH PSORIASIS OR PSORIATIC ARTHRITIS.

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**Background:** Obesity is a leading comorbidity in both psoriasis (Pso) and psoriatic arthritis (PsA) and is associated with common metabolic complications and increased cardiovascular (CV) risk. Obesity is also a risk factor for the onset of these diseases. Body composition and fat distribution have been rarely evaluated in Pso and PsA.
**Objectives:** In this study, we aimed to characterize the fat mass distribution in patients with Pso or PsA compared to a control group, with a special emphasis on the android/visceral region.
**Methods:** case-control study (NCT02849795). Patients with Pso (plaque psoriasis) or PsA (CASPAR criteria) were evaluated. Each patient was paired to a control subject, recruited in the same outpatient population, and matched for sex, age and body mass index (BMI) category. Clinical assessment included BMI, anthropometric measurements (waist circumference, waist /hip ratio), disease activity (PASI for Pso, CPDAI for PsA) and the SCORE CV risk score. Laboratory parameters of inflammation (ESR, CRP, IL-6), lipid parameters (total cholesterol, LDL and HDL cholesterol, triglycerides), metabolic parameters (glycemia, insulin, HOMA), serum adipokines (total and high molecular weight [HMW] adiponectin, leptin, resistin and retinol binding protein 4 [RBP4]) were measured. Body composition (lean mass, fat mass) and fat distribution (android/gynoid regions and visceral fat) were evaluated (DEXA, Lunar GE, CoreScan). Our primary criteria was the fat mass in the android/visceral region. Comparisons between patients and controls were performed with paired t tests, between all groups with ANCOVA (adjusted for age, sex, and BMI category) and Tukey post-hoc tests. Pearson correlations between CV risk and fat mass were calculated within groups.
**Results:** 52 patients with Pso and 52 patients with PsA and their respective paired-control were evaluated. Total fat mass was increased in Pso but not in PsA. Android fat and visceral fat were found higher in Pso ($p<0.05$) while the fat mass measurements did not differ between the patients with PsA and their controls. Waist circumference was higher in patients with Pso compared to their controls. Leptin, leptin/fat mass ratio, and total adiponectin were elevated in PsA while only the HMW/total adiponectin ratio was decreased in Pso. Insulin levels and HOMA were increased in both Pso and PsA groups. Finally, RBP4 was higher in both Pso and PsA patients compared to their respective controls. In patients with Pso, android and visceral fat were correlated with SCORE ($r=0.3$, $p=0.02$ and $r= 0.6$, $p < 0.0001$ respectively). In ANCOVA analysis, visceral fat was higher in Pso patients ($p=0.0029$), with a trend toward higher android fat ($p=0.055$), compared to PsA patients.
**Conclusion:** visceral fat is increased in patients with Pso but not in PsA. In parallel, both groups showed an elevation of circulating RBP4. Patients with Pso and PsA were also characterized by metabolic disturbances as showed by the increase in HOMA, and specific adipokine changes. In the Pso group, visceral fat is associated with CV risk evaluated by SCORE. Weight control and reduction of fat mass, especially visceral fat mass, may thus be an important concern in patients with Pso and appears less relevant in PsA.
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## SAT0442 EVOLVEMENT OF SWOLLEN JOINTS IN THE FIRST YEAR OF EARLY PSORIATIC OLIGOARTHRITIS.

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