FRI0445 IDENTIFICATION OF PSORIATIC ARTHRITIS USING AN ADMINISTRATIVE CLAIMS-BASED ALGORITHM

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Background: Accurately identifying psoriatic arthritis (PsA) in large electronic healthcare database is critical for epidemiological studies.

Objectives: To develop and validate a claims-based algorithm to identify patients with PsA.

Methods: We conducted a retrospective chart review of the Partners Healthcare electronic medical record linked to Medicare claims from year 2012 to 2014. 7 claims-based algorithms were developed to identify PsA: 1) ≥ 2 International Classification of Diseases, Ninth Revision (ICD-9) codes for PsA (696.0) and at least one diagnosis of psoriasis (696.1) by any physician; 2) ≥ 2 diagnosis of PsA with at least 1 diagnosis by rheumatologist; 3) ≥ 2 PsA diagnosis with at least 1 diagnosis by rheumatologist and ≤ 1 diagnosis of rheumatoid arthritis (714.0); 4) ≥ 2 diagnosis of PsA and at least 1 diagnosis of psoriasis by dermatologist; 5) ≥ 1 diagnosis of PsA by rheumatologist and ≥ 1 diagnosis of psoriasis by dermatologist; 6) ≥ 2 diagnosis of PsA by any physician and ≥ 1 claims for PsA medication; 7) ≥ 2 diagnosis of PsA with at least 1 diagnosis by rheumatologist and ≥ 1 claims for PsA medication. The ICD-9 codes were separated by ≥ 7 days but < 365 days. Medical record by the treating physician was considered as the gold standard, and two independent physicians confirmed the presence of PsA. Positive predictive value (PPV) and 95% confidence intervals (CI) of the algorithms were calculated.

Results: The 7 algorithms identified 357, 399, 315, 223, 215, 372, and 276 records, respectively. Approximately 45% of the identified records with adequate data were reviewed. The PPV of the algorithms ranged from 75.2% to 88.6% (Table 1). Mean age of identified PsA patients ranged from 72.6 to 73.5 years old. Presence of psoriasis 1 year prior to index date of PsA ranged from 54.2% to 89.2%. Algorithm 6 which captured ≥ 2 diagnosis of PsA and ≥ 1 claims for PsA-related medications identified second highest number of patients (n=372) yet still yielded high PPV of 82.4% (95% CI 76.5, 88.3).

Conclusion: All seven claims-based algorithms had a high PPV of 75-89% in identifying PsA. A claims-based algorithm utilizing two or more diagnosis codes of PsA by any physician with a claim for PsA medication can be a useful and efficient tool to identify the PsA population in large claims databases.

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Table 1. Predictive Values of Proposed Algorithms for Identifying Psoriatic Arthritis

Algorithms	Records Identified	Charts Reviewed (%)	PsA per treating MD, PPV% (95% CI)
Diagnosis only			
1. ≥ 2 diagnosis of PsA and ≥ 1 diagnosis of psoriasis by any physician	357	141 (39.5)	75.2 (68.0, 82.3)
Diagnosis with Specialist Visit			
2. ≥ 2 diagnosis of PsA with at least 1 diagnosis by rheumatologist	399	185 (46.4)	80 (74.2, 85.8)
3. ≥ 2 diagnosis of PsA with at least 1 diagnosis by rheumatologist and ≤ 1 diagnosis of RA	315	147 (46.7)	81.6 (75.4, 87.9)
4. ≥ 2 diagnosis of PsA and at least 1 diagnosis of psoriasis by dermatologist	223	95 (42.6)	77.9 (69.6, 86.2)
5. ≥ 1 diagnosis of PsA by rheumatologist and ≥ 1 diagnosis of psoriasis by dermatologist	215	114 (53.0)	85.1 (78.5, 91.6)
Diagnosis and Medication Dispensing			
6. ≥ 2 diagnosis of PsA and at least 1 medication dispensing for PsA	372	159 (42.7)	82.4 (76.5, 88.3)
7. ≥ 2 diagnosis of PsA with at least 1 diagnosis by rheumatologist and at least 1 medication dispensing for PsA	276	123 (44.6)	88.6 (83.0, 94.2)

* PsA, Psoriatic arthritis; MD, Medical doctor; PPV, Positive predictive value; ICD, International Criteria of Diagnosis; RA, Rheumatoid arthritis

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FRI0446 ATTAINMENT OF MINIMAL DISEASE ACTIVITY (MDA) IN PSORIATIC ARTHRITIS (PSA) PATIENTS (PTS) DEPENDING ON THE TIME OF SYNTHETIC (S) DMARDS INITIATION IN CLINICAL PRACTICE: RUSSIAN PSA REGISTRY (RU-PSART) DATA

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Background: According to the EULAR recommendations and treat to target strategy sDMARD are the first line of PsA therapy. The goal of PsA treatment is attaining MDA. But there are contradictory data about the efficacy of sDMARDs in PsA pts. Data was collected from 25 rheumatology clinics of the Russian Federation.

Objectives: To investigate the cumulative frequency and the time of MDA attainment in early and long-term PsA after starting sDMARDs in clinical practice.

Methods: 253 (M/F-93/160) PsA pts according to CASPAR criteria were included in the RU-PsART, after signing consent participation forms; median (Me) age 47 [Min 20 – Max 82] years (yrs.). All patients were divided into two groups according to disease duration at time of sDMARDs initiation: early PsA ≤ 2 yrs. (165pts) and long-term PsA > 2 yrs (88pts). All pts underwent standard clinical examinations of PsA and psoriasis activity. All pts were treated with the following sDMARDs: Oral Methotrexate (MTX) (103pts), intramuscular MTX (30pts), subcutaneous MTX (78pts), Leflunomide (7pts), Sulfasalazine (24pts), Apremilast (10pts), Tofacitinib (1pts). MDA was defined as ≥ 5 of the following criteria: tender joint count ≤ 1 , swollen joint count ≤ 1 , PASI ≤ 1 or BSA ≤ 3 , patient pain global assessment VAS ≤ 15 , patient's global disease activity VAS ≤ 20 , HAQ ≤ 0.5 , enthesitis count ≤ 1 . The cumulative frequency and the time of MDA attainment were calculated in both groups. Kaplan-Meier cumulative analysis, Me [Min-Max], ORs with 95% CI, Breslow, Tarone-Ware, Log Rank tests were performed. All CI > 1 , p < 0.05 , were considered to indicate statistical significance.

Results: MDA has been achieved by the use of sDMARDs treatment in 39 out of 165 (24%) pts with early PsA and in 4 out of 88 (5%) pts with long-term PsA. Early PsA pts have more chance to achieve MDA in comparison to long-term PsA pts, OR=6.5 [CI 95% 2.2-18.9]. Comparative analysis has shown that cumulative frequency of MDA achievement after sDMARDs initiation was significantly higher (42% vs 5%) and faster (21 months vs 11 yrs.) in early PsA than in long-term PsA (p < 0.05 for Breslow, Tarone-Ware and Log Rank tests) (Fig. 1). **Fig. 1.** Cumulative frequency and the time of MDA achievement after starting sDMARDs in early and long-term PsA.

Conclusion: Our study suggests that sDMARDs initiation (mostly MTX-monotherapy) at an early stage of PsA allows to achieve MDA significantly faster and more often than in long-term PsA.

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