Therefore, this study examined the characteristics of RA-ILD patients with AE, and the variables associated with mortality due to AE of RA-ILD.

Objectives: To investigate the risk factors for AE and mortality of RA-ILD.

Methods: We retrospectively collected the clinical data of 165 RA-ILD patients admitted to our hospital between July 2010 and October 2019. We compared clinical characteristics between patients who developed AE (AE group) and those who did not (non-AE group), and identified the variables significantly associated with AE occurrence. We also compared the admission characteristics of those who survived (survivor group) and those who died (non-survivor group) after admission for AE. AE was defined using previously proposed criteria [3], which were modified slightly for application to RA-ILD.

Results: The mean patient age was 73.6 ± 9.7 years and 97 (71.9%) patients were female. Thirty (22.2%) patients developed AE, of whom thirteen (43.3%) died (mean follow-up, 64.9 months). In univariate analyses UIP pattern and MTX were not associated with AE. However, in multivariate analyses, UIP pattern was associated with AE (OR 2.68, 95% CI 1.10–6.52, $p=0.03$). Median age (70 vs. 80 years, $p=0.003$), non-use of MTX (70.6% vs. 23.1%, $p=0.025$), and C reactive protein level (median 9.38 vs. 18.12 mg/dL, $p=0.02$) on admission were significantly higher in patients who died of AE. In the Cox proportional hazard model, UIP pattern (HR 4.67, 95% CI 1.02–21.5, $p=0.048$) and non-use of MTX (HR 0.16, 95% CI 0.04–0.72, $p=0.016$) were associated with death.

Conclusion: Our data suggest that the UIP pattern is related to AE, and non-use of MTX and UIP pattern are related to death due to AE of RA-ILD.

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SAT0041

EFFECT OF INTRA-ARTICULAR GLUCOCORTICOID INJECTION ON RADIOGRAPHIC DAMAGE IN PATIENTS WITH RHEUMATOID ARTHRITIS

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Background: Intra-articular glucocorticoid injection (IAGI) has been used as part of a treat-to-target strategy in patients with rheumatoid arthritis (RA). However, recent studies revealed that repeated intra-articular triamcinolone injection into knees with osteoarthritis resulted in significant greater cartilage volume loss after two years. Limited knowledge exists about the long-term efficacy of IAGI in RA, assessed by radiographic changes.

Objectives: To investigate whether IAGI have an additional benefit on achieving remission or low disease activity (REM/LDA) after 3 month, and radiographic progression over the next two years. Additionally, we identified the factors associated with early achievement of REM/LDA and radiographic progression.

Methods: We performed a retrospective study of RA patients who had active arthritis in the hand or wrist joints and received IAGI adjunct to disease modifying anti-rheumatic drugs, compared with those never had received IAGI. Short-term efficacy was assessed by changes of disease activity score in 28 joints (DAS28) after 3 months and long-term efficacy by changes of Sharp score of hand radiographs (HSS) taken before and two years after the onset of active arthritis. The radiographic progression was defined as $\Delta\text{HSS}/\text{year} \geq 1.5$. Conditional logistic regression analysis was used to identify predictors for radiographic progression.

Results: We identified 116 RA patients who received IAGI on the hand or wrist joints and 102 IAGI-naïve patients. After 3 months after active arthritis, 61% patients treated with IAGI and 39% of IAGI naïve patients achieved low disease activity or remission ($P=0.009$). In the next two year, 45% of patients with IAGI and 34% of IAGI-naïve patients were radiographically progressed ($P=0.114$). The $\Delta\text{HSS}/\text{year}$ of patients received IAGI was 1.0 (Interquartile ranges [IQR], 0–3.8), while that of IAGI-naïve patients was 0 (IQR, 0–2.5) ($P=0.005$). After adjusting disease duration, baseline HSS and 3-month DAS28, IAGI and wrist joint involvement were associated with radiographic progression.

Conclusion: IAGI given in the hand and wrist joints of patients with RA were associated with short-term control of disease activity, however, long-term

structural damage in the subsequent two years. Wrist joint arthritis had higher potential for radiographic progression, which should be carefully monitored.

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SAT0042

PREDICTIVE VALUE OF IMMUNOLOGICAL AND IMAGING BIOMARKERS ON ACHIEVING REMISSION AT 6 MONTHS IN RHEUMATOID ARTHRITIS PATIENTS TREATED BY INTRAVENOUS BDMARDS

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Background: RA is the most prevalent chronic inflammatory rheumatism, responsible of functional impairment.

Objectives: To investigate the value of biological and imaging biomarkers on predicting DAS 28 remission at 6 months, in RA patients initiating IV bDMARD.

Methods: From 2008 to 2017, 317 RA patients fulfilling ACR 1987 and/or ACR-EULAR 2010 criteria for RA, initiated IV bDMARDs in our department of Rheumatology. Patients were excluded in cases of lack of information on disease activity assessment before and at 6 months of treatment and on immunological status and titers (ACPA, RF, ANA) at baseline. For patients receiving successive IV bDMARDs during this time period ($n=30$), a randomization permitted to select 1 treatment sequence. On 173 patients eligible to the study, 4 were lost to follow-up and 14 stopped treatment due to adverse events before 6 months. Clinical, biological and imaging (US and RX) data, were collected when available at treatment initiation. US examination was performed on 12 targeted joints (wrist, MCP2-3-5 and MTP2-3-5) with qualitative and quantitative evaluation on B mode and Power Doppler (PD) for synovitis, tenosynovitis and erosion. The modified Sharp/van der Heijde erosion score was performed by 2 independent readers blindly from clinical and US informations. Remission was defined by a DAS 28 < 2.6 at 6 months. Only variables with a $p<0.2$ in univariate analysis were included in the multivariate model.

Results: On 155 RA patients, 11 had a disease duration < 2 year, 44 (28.3%) were on first line of IV bDMARDs and 111 patients received at least one IV bDMARD (mean 2.5 (1.3)).

Table 1. Characteristics of the patients (n=155) at baseline

Variables	N (%)	Mean (SD)
Clinical characteristics		
Age (years)		54.8 (12.2)
Female	113 (72.9)	
Disease duration (months)		166.9 (118.8)
DAS 28		5.2 (1)
Treatments		
Corticosteroids / dose (mg/day)	99 (85.3)	10.9 (6)
Monotherapy	56 (36.1)	
IV bDMARD		
Abatacept	27 (17.4)	
Infliximab	11 (7.1)	
Rituximab	84 (54.2)	
Tocilizumab	33 (21.3)	
Immunology		
ACPA + /titer (IU)	132 (85.2)	618.5 (791.0)
RF + /titer (IU/ml)	114 (74.5)	184.7 (351.3)
ANA + / levels	87 (56.1)	1453 (3836)
Radiography		
Sharp's erosion score (n=110)		49.4 (46.2)
US		
Nb Erosion (n=95)		3.0 (2.3)
Nb B mode Synovitis (n=128)		6.0 (4.1)
Nb PD+ Synovitis (n=130)		4.8 (3.8)
Nb B mode Tenosynovitis (n=129)		1.6 (2)
Nb PD+ Tenosynovitis (n=129)		1.3 (2.1)

At 6 months, 33 patients (21.3%) were in remission. Predictive values of biomarkers are presented in table 2.