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IMPACT OF COMORBIDITY ON THE USE OF BIOLOGICAL AND TARGETED THERAPY IN RHEUMATIC DISEASES IN THE CLINICAL PRACTICE

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Background: Comorbid conditions often accompany rheumatic diseases and can influence the prescription of immunosuppressive therapy. Comorbidity seems to be a factor that is still underestimated in actual practice.

Objectives: To study the influence of comorbidity on the prescription of biological and targeted therapies in patients with rheumatic diseases (RD) in clinical practice.

Methods: We perform a retrospective analysis of comorbidity and prescription of biological and targeted immunosuppressors in a group of in-patients with systemic autoimmune RD in rheumatology department. From January 2018 to January 2019, 218 patients with inflammatory RD hospitalized - 146 (67.5%) women, mean age 50.6±14.6 years. Diagnoses: rheumatoid arthritis - 83 patients, spondyloarthritis - 80, systemic lupus erythematosus - 19, systemic sclerosis - 16, ANCA-associated vasculitis - 10, other conditions - 10 patients. Biologics were used in 117 (53.7%) of patients (anti-TNFs - 64 patients, rituximab - 18, tocilizumab - 16, abatacept - 8, secukinumab - 4, ustekinumab - 4, tofacitinib - 3 patients). We examined patients for comorbidities through careful examination of the history, medical records, and general therapeutic laboratory and instrumental screening. The Charlson comorbidity index calculated for every patient.

Results: 174 (79.8%) patients had at least 1 comorbid condition. The most frequent comorbidities were type2 diabetes (19.5% patients), chronic kidney disease (12.6%), cerebrovascular accident (11.5%), ischemic heart disease and chronic heart failure (11%), chronic liver disease (7.5%). Mean Charlson index was 2.16±2.05 in total group; it was significantly lower in patients who were treated with biological and targeted therapy (1.64±1.8) than in patients who did not received this therapy (2.76±2.1), p<0.01. Biologics were prescribed in 81.8% of patients without comorbidities, in comparison with 55.3% of patients with Charlson comorbidity index 1 or 2, and 36.3% of patients with Charlson index 3 or more.

Conclusion: Comorbidity has a direct impact on the use of biological and targeted therapy in patients with rheumatic diseases in real clinical practice, limiting the ability to control the activity of the disease. It is necessary to develop a general therapeutic strategy for treating comorbid conditions in patients with rheumatic diseases.

REFERENCES:

- [1] Charlson ME, Pompei P, Ales KL, MacKenzie CR. A new method of classifying prognostic comorbidity in longitudinal studies: Development and validation. *Journal of Chronic Diseases*. 1987; 40 (5): 373-83

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PREVALENCE, PATIENT CHARACTERISTICS, AND TREATMENT OF GOUT AND ASYMPTOMATIC HYPERURICEMIA IN JAPAN: CROSS-SECTIONAL STUDY OF A HEALTH INSURANCE CLAIMS DATABASE

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Background: The prevalence of gout is increasing worldwide [1,2], but evidence suggests that current treatment practices do not effectively

reduce serum uric acid (sUA) levels in many gout patients [3]. In Japan, urate lowering therapy (ULT) is provided to patients diagnosed with asymptomatic hyperuricemia as well as to those with gout. However, the actual treatment situation for asymptomatic hyperuricemia has not been well-documented.

Objectives: To assess the prevalence and characteristics of gout and asymptomatic hyperuricemia and the current treatment practices for these conditions in Japan.

Methods: This retrospective cross-sectional study assessed disease prevalence, patient characteristics, prescriptions, proportion of patients achieving target sUA, and incidence of gouty arthritis among 2,531,383 individuals in a database, using data from Japanese health insurance claims and medical check-ups from April 2016 to March 2017.

Results: Gout was diagnosed in 1.1% (men 1.9%, women <0.1%) of the study population and asymptomatic hyperuricemia in 2.6% (men 4.1%, women 0.4%). Hyperuricemia (sUA >7.0 mg/dL) was identified in 13.4% (men 19.6%, women 1.0%) of cases in which sUA level was measured at check-up. ULT adherence was satisfactory (median medication possession ratio [MPR] of 69.0% for febuxostat and 78.1% for allopurinol in gout, and 79.5% and 88.5%, respectively, in asymptomatic hyperuricemia), but most patients were receiving low-dose ULT. The sUA target (≤6.0 mg/dL) was achieved by less than half of patients treated with either febuxostat or allopurinol (Table). In gout patients, the incidence proportion of gouty arthritis was 47.8% and the incidence rate was 0.74 flares/person-year.

Conclusion: The prevalence of gout in our study population was low. Japanese physicians often treat gout and asymptomatic hyperuricemia with low-dose ULT, and many patients fail to reach their target sUA, suggesting gout management is suboptimal in Japan.

REFERENCES:

- [1] Zhu Y, et al. Prevalence of gout and hyperuricemia in the US general population: the National Health and Nutrition Examination Survey 2007-2008. *Arthritis Rheum* 2011;63(10):3136-41.
- [2] Kuo CF, et al. Global epidemiology of gout: prevalence, incidence and risk factors. *Nat Rev Rheumatol* 2015;11(11):649-62.
- [3] Roddy E, et al. Concordance of the management of chronic gout in a UK primary-care population with the EULAR gout recommendations. *Ann Rheum Dis* 2007;66(10):1311-5.

Table

	Gout		Asymptomatic hyperuricemia	
	Febuxostat	Allopurinol	Febuxostat	Allopurinol
N	8215	6521	16312	14220
Mean prescribed dose	18.9 mg	145.6 mg	16.5 mg	131.3 mg
Median MPR	69.0%	78.1%	79.5%	88.5%
Proportion of patients achieving target sUA (≤6.0 mg/dL)	44.7% (876/1960)	33.8% (599/1771)	47.8% (2032/4254)	35.9% (1691/4704)

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FRI0679

PREDICTORS OF DEATH IN 3693 PATIENTS WITH RHEUMATOID ARTHRITIS FOLLOWED FOR UP TO 12 YEARS IN CLINICAL PRACTICE

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Background: Patients with RA have shorter life expectancy than the background population. Severe disease, as reflected in high disease activity, comorbid conditions and functional disability have historically been associated with increased mortality (1-2). Mortality after the introduction of

biological therapies has not been investigated in detail, and little is known about the predictive value of sociodemographic and lifestyle factors.

Objectives: To investigate the predictive value of a panel of potential predictors of death in a cohort of patients with RA followed for up to 12 years during the era of biological treatments.

Methods: Outpatients with RA were recruited consecutively between July 2006 and July 2007 and followed in routine care with prospective registrations in the DANBIO registry until death or August 30th 2018, whichever occurred first. Baseline variables considered to be potential predictors were: disease activity, disease duration, IgM-rheumatoid factor (IgM-RF), radiographic status (erosive disease yes/no) and medical therapy as well as patient-reported marital status, educational level, comorbid conditions, smoking, exercise, body mass index (BMI) and health assessment questionnaire (HAQ). Vital status and date of death were extracted from the Danish National Register. A cox proportional hazards model was used to estimate the hazard ratio for death for each of the potential predictors.

Table. Age-adjusted cox proportional hazards model with death as failure.

	Hazard Ratio	95% CI	p-value
Women (vs. men)	0.53	0.44 0.63	<0.01
IgM-RF positive (vs. negative)	1.22	1.01 1.48	0.04
Baseline HAQ score (per 0.125 increase in score)	1.33	1.19 1.49	<0.01
Glucocorticoid treatment last month (vs. none)	1.50	1.28 1.75	<0.01
Weekly exercise (vs. no exercise)	0.77	0.67 0.90	<0.01
BMI <18.5 kg/m ² (vs. BMI 18.5-25)	1.36	0.99 1.88	0.06
BMI >25 kg/m ² (vs. BMI 18.5-25)	0.94	0.80 1.09	0.42
Current smoking (vs. never)	1.85	1.51 2.26	<0.01
Former smoking (vs. never)	1.26	1.05 1.51	0.01
Married or cohabiting (vs. living alone)	0.71	0.61 0.83	<0.01
One comorbid condition (vs. none)	1.21	0.99 1.49	0.07
Two or more comorbid conditions (vs. none)	1.62	1.34 1.97	<0.01

N=3053, number of deaths=762.

Results: 3693 patients were recruited at baseline, 75% women, 77% IgM-rheumatoid factor positive, 65% with erosive disease, median (IQR) age 62 years (52-71), disease duration 7 years (3-15), DAS28 3.0 (2.2-3.9), HAQ 0.63 (0.25-1.25). 20% received a biological disease modifying anti-rheumatic drug (DMARD), 71% received a synthetic DMARD and 9% received no DMARD. The median (IQR) duration of follow-up was 11 years (9-11); 1041 patients (28%) died during follow-up. 640 patients were excluded from the regression model due to missing baseline data; these individuals were slightly (median of 3 years) older than those who entered, but with similar disease duration and disease activity. All baseline variables were statistically significant predictors in univariable analyses. Table shows hazard ratio estimates in the multivariable model, which included 3053 patients; 762 (25%) deaths. IgM-RF positivity, higher HAQ score, glucocorticoid therapy, smoking (current and former) and two or more comorbid conditions were predictors of death. Low BMI was a borderline significant predictor for death. Female sex, weekly exercise and cohabiting decreased the risk of death.

Conclusion: In a large cohort of RA patients followed for a decade in the era of biological treatments, we identified strong clinical (high HAQ, comorbidity), treatment related (glucocorticoid last month), sociodemographic and lifestyle related (male sex, living alone, smoking, physical inactivity, low BMI) risk factors for death. In the effort to prevent a poor long term outcome in patients with RA, this study provides new insight into potentially modifiable baseline variables.

REFERENCES:

- [1] Mok, CC, et al. Life expectancy, standardized mortality ratios, and causes of death in six rheumatic diseases in Hong Kong, China. *Arthritis Rheum* 2011; 63: 1182-1189.
- [2] Sokka, T, et al. Mortality in rheumatoid arthritis: 2008 update. *Clin exp Rheumatol*. 2008 Sep-Oct; 26 (5 suppl 51) S: 35-61.

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THE ASSOCIATION BETWEEN ANKYLOSING SPONDYLITIS AND UNEMPLOYMENT

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Background: Previous registry studies have noted increased rates of unemployment in patients with ankylosing spondylitis (AS)(1-2). With improved treatment options and earlier detection of AS, its was anticipated that this would no longer be true.

Objectives: The Ankylosing Spondylitis Registry of Ireland(ASRI) is a source of epidemiological data on AS patient in Ireland. The aim of this study was to examine unemployment rates in this population and possible links with disease activity, function and quality of life.

Methods: An analysis of the patient population of the ASRI with data collected from 2013 to 2017 was performed using IBM SPSS Statistics version 25. Comparison of the mean ASQoL, HAQ, BASDAI, BASFI, and BASMI score were carried out between those employed versus those unemployed. An independent two tailed t test and a Mann Whitney U test was then carried out to determine significance. Further analysis was then performed using patient age and disease duration.

Results: At the time of analysis 734 patient were enrolled in the registry. The mean age was 45 years, with 77% male and 23% female, mean duration of disease was 18 years (means: ASQoL 6.6, HAQ 0.5, BASDAI 4.0, BASFI 3.6, BASMI 3.6). Unemployment rate in the ASRI population was 23%. National unemployment during the same time period was noticeably lower with a range of 6.2% to 13.1% (3). Those patients were also noted to have higher ASQoL (9.7 versus 5.6), HAQ (0.85 versus 0.45), BASDAI (5.3 versus 3.7), and BASFI scores (5.2 versus 3.2). The difference between the means was statistically significant (p<0.05) across all 4 measures. However, BASMI scores were significantly lower in the unemployed (3.8 versus 3.0). No statistically significant difference was detected between genders. The distribution of age and disease duration was determined to be equal between the groups.

Figure 1

Conclusion: There is a higher prevalence of unemployment in the AS population as compared to the general population. Unemployed AS patients tend to have decreased quality of life, poorer levels of function, and higher levels of disease activity. Further research is needed to determine a causation between level of disease activity and employment.

REFERENCES:

- [1.] Webers C, Vanhoof L, Genderen SV, et al; Employment perspectives of patients with ankylosing spondylitis in the biologics era; *Annals of the Rheumatic Diseases* 2017;76:157.
- [2] Webers C, et al; Employment and the role of personal factors among patients with ankylosing spondylitis: a Dutch cross-sectional case-control study; *RMD Open* 2018. Jun27;4(1)
- [3] Central Statistics Office Ireland