	Totals	Controls	RA	SLE	Sicca/Sjogren's	Scleroderma	Spondyloarthropathies	DM/PM	Vasculitides	VTE
Counts (% of hospitalizations)										
Overall	461089203 (100)	451761667 (97.98)	5609502 (1.22)	1980776 (0.43)	2 74 106 (0.06)	3 35 926 (0.07)	4 36 702 (0.09)	1 82 420 (0.04)	5 08 104 (0.11)	8822456 (1.91)
2000/ 2002	89251049 (100)	87822413 (98.4)	8 29 687 (0.93)	3 24 117 (0.36)	32 618 (0.04)	60 004 (0.07)	56 851 (0.06)	32 495 (0.04)	92 863 (0.1)	1292852 (1.45)
2003/ 2005	92374203 (100)	90738381 (98.23)	9 50 197 (1.03)	3 74 136 (0.41)	40 013 (0.04)	66 331 (0.07)	67 450 (0.07)	36 482 (0.04)	1 01 213 (0.11)	1582058 (1.71)
2006/ 2008	95006960 (100)	1847533 (98.05)	28 589 (1.16)	14 668 (0.43)	1334 (0.05)	1745 (0.07)	2126 (0.09)	1536 (0.04)	4302 (0.11)	1901832 ²
2009/ 2011	94195026 (100)	1961465 (97.73)	37 829 (1.4)	14 408 (0.46)	1903 (0.08)	1920 (0.08)	2619 (0.11)	1603 (0.04)	4767 (0.11)	2026514 (2.15)
2012/ 2014	90261964 (100)	1948300 (97.48)	40 800 (1.56)	15 635 (0.5)	2330 (0.09)	2145 (0.08)	3670 (0.14)	1630 (0.04)	4690 (0.12)	2019200 (2.24)
VTE%										
Overall	1.91	1.89	2.62	3.38	2.65	2.58	2.49	3.89	4.08	-
2000/ 2002	1.45	1.43	2.1	2.98	2.65	1.96	1.89	3.17	3.29	-
2003/ 2005	1.71	1.7	2.34	3.35	2.09	2.56	2.03	3.57	3.85	-
2006/ 2008	2	1.98	2.59	3.63	2.64	2.55	2.58	4.09	4.19	-
2009/ 2011	2.15	2.13	2.88	3.35	2.69	2.65	2.6	4.14	4.45	-
2012/ 2014	2.24	2.21	2.89	3.48	2.9	3.12	2.84	4.39	4.5	-
Adjusted odds of VTE association (p-value, 95% CI)										
	-	1	1.24 (<0.0001, 1.22–1.3)	2.2 (<0.0002, 2.17–2.3)	1.3 (<0.0003, 1.28–1.4)	1.4 (<0.0004, 1.3–1.45)	1.3 (<0.0005, 1.2–1.33)	2 (<0.0006, 1.9–2.2)	1.8 (<0.0007, 1.76–1.9)	-

was used to analyse annual trends of prevalence in terms of annual percentage change (APC). Logistic regression with survey command was used to derive adjusted odds of VTE association for all years combined.

Results: We included a total of 461,089,203 hospitalizations among which 8,822,456 (1.91%) had VTE (table 1). An upward trend in the prevalence of VTE (APCs 2.45–4.16) (and PE subset) was noted in most of the rheumatologic disease groups (figure 1). DVT, however, had a decreasing or non-significant increasing trend among most disease groups (data for DVT and PE not shown). The adjusted odds of VTE association was highest among SLE group (aOR=2.2, CI=2.17–2.3) followed by DM/PM (aOR=2.0, CI=1.9–2.2) (table 1).

Table 1 Frequency counts of rheumatologic diseases and controls; prevalence of VTE and adjusted regression analysis of VTE association

Abstract THU0678 – Figure 1 Trend of proportion of VTE by disease groups and controls (APCs with * are statistically significant trends)

Conclusions: Inflammatory rheumatologic diseases seem to be associated with higher prevalence and odds of having VTE among hospitalised patients and the overall trend is rising. This might indicate some lag in following of guidelines for VTE prophylaxis. Closer look into the implications of stricter prophylaxis among rheumatologic patients is a matter of further studies.

Disclosure of Interest: None declared

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Public health, health services research and health economics

THU0679 INCREASED HOSPITALISATION RATES FOLLOWING HEART FAILURE DIAGNOSIS IN RHEUMATOID ARTHRITIS

E. Myasoedova^{1,1}, J.M. Davis, III¹, S.J. Achenbach², E.L. Matteson¹, S. Setoguchi³, S.E. Gabriel⁴, C.S. Crowson². ¹Rheumatology, ²Health Sciences Research, Mayo Clinic College of Medicine, Rochester, MN; ³Rutgers School of Public Health; ⁴Rutgers Robert Wood Johnson Medical School, New Brunswick, NJ, USA

Background: There is a 2-fold increased risk of heart failure (HF) in rheumatoid arthritis (RA) compared to the general population. Little is known about hospitalisation rates in patients with RA and HF.

Objectives: We aimed to compare the frequency of and trends in hospitalizations after HF diagnosis in patients with and without RA during 1987–2015 and to assess risk factors for hospitalizations following HF in RA.

Methods: The study included a retrospectively identified population-based cohort of patients with incident HF and prior RA (age ≥ 18 years, 1987 ACR criteria) and a cohort of incident HF patients without RA matched 3:1 on age, sex, and year of HF diagnosis. Hospitalizations at the time of HF diagnosis were excluded. All subjects were followed until death, migration, or 12/31/2015. Person-years methods and rate ratios (RR) from Poisson regression models were used to compare hospitalisation rates (number of hospitalizations divided by person-years of follow-up) between the groups. Conditional frailty models were used to examine risk factors for hospitalisation.

Results: The study included 212 patients with RA (mean age at HF diagnosis 78.3 years; 68% female) and 636 non-RA patients (mean age at HF diagnosis 78.6 years; 68% female). The hospitalisation rate after HF diagnosis was higher in RA vs non-RA (RR 1.16; 95% CI 1.08–1.25). This difference may be decreasing after 2010 (figure 1). The magnitude of the increase was similar in both sexes and across all ages. In a subset with available echocardiography (n=68 RA and 449 non-RA), HF with preserved ejection fraction (HFpEF) was similarly prevalent in RA (57%) vs non-RA (51%; p=0.3). Among those with HF with reduced ejection fraction (HFrEF) RA patients had more hospitalizations than non-RA subjects (RR

1.65; 95% CI 1.29–2.09); this was not observed in HFpEF (RR 0.80; 95% CI 0.63–1.01). Following HF diagnosis, RA patients were more likely to be hospitalised for non-cardiovascular causes (RR 1.26; 95% CI 1.14–1.39), but not for HF (RR 0.96; 95% CI 0.76–1.21) or other cardiovascular causes (RR 0.99; 95% CI 0.81–1.20) compared to the non-RA patients. Readmission rates within 30 days of prior discharge were similar in RA and non-RA ($p=0.14$). Smoking (current or former), prior myocardial infarction (MI) and higher score on Charlson comorbidity index were associated with increased risk for hospitalisation: hazard ratio (HR) 1.33, 95% CI 1.06–1.68; HR 1.37, 95% CI 1.03–1.82; and HR 1.10, 95% CI 1.06–1.14, respectively.

Conclusions: Hospitalisation rate following HF diagnosis was 16% higher in RA than in non-RA patients regardless of sex and age. This difference was particularly apparent between 1990 and 2010. Increased hospitalisation risk was mostly among patients with RA who had HFpEF rather than HF, and was predominantly due to non-cardiovascular causes. Smoking, prior MI and Charlson comorbidity index were associated with increased risk of hospitalisation suggesting that increased complexity of management of patients with comorbid RA may play a role in more frequent hospitalizations in the RA cohort.

Disclosure of Interest: None declared

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Epidemiology, risk factors for disease or disease progression

THU0680

SURVIVAL ANALYSIS OF PATIENTS WITH CONNECTIVE TISSUE DISEASE ASSOCIATED INTERSTITIAL LUNG DISEASE

T. Xu, X. ZHANG. Rheumatoidimmunologic Department, Guangdong Academy of Medical Sciences, Guangdong General Hospital, Guangzhou, China

Background: Interstitial lung disease (ILD) is common in connective tissue diseases (CTDs) and can lead to significant shortened survival. Although the various CTDs associated with ILD are often considered as a whole because of their sharing the same autoimmune nature, there are substantial differences in the natural course in each specific CTD. Still, there is little research comparing the mortalities in different underlying CTDs and investigated the risk factors.

Objectives: We aimed to examine mortality in patients with ILD secondary to dermatomyositis and polymyositis (DM/PM), systemic sclerosis (SSc), rheumatoid arthritis (RA), primary Sjögren syndrome (pSS), and systemic lupus erythematosus (SLE), to test whether the survival was associated with ILD imaging subtypes, as well as to identify independent risk factors for CTD-ILDs.

Methods: We retrospectively reviewed the medical records of patients with newly diagnosed CTD-ILD. The high-resolution computed tomography of lung images was reviewed by two expert pulmonary radiologists. According to imaging manifestations, ILD was categorised into three subtypes, i.e., usual interstitial pneumonia (UIP), nonspecific interstitial pneumonia (NSIP) and indeterminate, respectively. The extensity of ILD lesions was also evaluated as grade 1, 2, 3. The primary outcome assessed was all-cause mortality. We examined survival after stratifying on each specific CTD, or lung-CT imaging subtypes, respectively. We used Cox proportional hazards model to identify independent predictors of survival.

Results: Three hundred and twenty-five patients were included with a median follow-up time of 54 months. Eighty-four (25.8%) had DM/PM, 73 (22.5%) had SSc,

63 (19.4%) had RA, 58 (17.8%) had pSS, 47 (14.5%) had SLE. Overall, 98 (30.2%) patients died. The survival rate of pSS-ILD (85.1%) and SLE-ILD (79.3%) were significantly higher than other CTD-ILDs [SSc-ILD (68.5%), RA-ILD (66.7%), DM/PM-ILD (58.6%), $p=0.009$]. However, after categorised into three different ILD imaging subtypes, it showed no statistical differences in survival rates (64.5%, 73.6%, 69.5% of the UIP group, NSIP group, indeterminate group, respectively, $p=0.558$). Multivariable analysis revealed that compared with DM/PM-ILD, the mortality rate was significantly lower in pSS-ILD (RR=0.321, $p=0.001$), RA-ILD (RR=0.466, $p=0.016$), SSc-ILD (RR=0.566, $p=0.045$), and SLE-ILD patients (RR=0.363, $p=0.018$), and old age (RR=1.028, $p=0.002$), long course of disease (RR=1.004, $p=0.005$), extended ILD lesions (RR=1.854, $p=0.025$) were independent predictors of mortality in all types of CTD-ILD. The present study shows DM/PM-ILD patients had the worst prognosis then pSS-ILD, RA-ILD, SSc-ILD, and SLE-ILD patients. Age, disease course, intensity of ILD lesions at baseline is also critical for the survival of CTD-ILD patients.

Conclusions: The present study shows DM/PM-ILD patients had the worst prognosis then pSS-ILD, RA-ILD, SSc-ILD, and SLE-ILD patients. Age, disease course, intensity of ILD lesions at baseline is also critical for the survival of CTD-ILD patients.

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THU0681

ESTABLISHING THE BATH ANKYLOSING SPONDYLITIS METROLOGY INDEX (BASMI) NORMATIVE VALUES IN A MALAYSIAN POPULATION: THE IMPORTANCE OF SEX AND AGE FACTORS

A.F. Nurul Ain¹, I.S. Lau², S.C. Gun³, S. Wahinuddin⁴, P.S. Ong⁴, H. Heselynn⁵, B.E. Tan⁶, H.C. Chong⁷, A. Hilmi⁸, M. Asmah⁹, M.I. Asmah¹⁰, Y.L. Loh¹¹, A. L. Lim¹², H. Noor Shahrizat¹³, C.L. Teh¹⁴, G.R. Ling¹⁵, E.Y.Y. Chong¹⁶, A. H. Ruhaila¹⁷, A.M. Suhaida¹⁸, R. Shamala⁵, R. Azmillah¹⁹, M.Z. Molyza¹⁹, S. Salsabil¹, L.K. Tan¹, M. Shahnaz²⁰, C.L. Too¹. ¹Allergy and Immunology Research Centre, Institute for Medical Research (IMR), Kuala Lumpur; ²Department of Medicine, Selayang Hospital, Selangor; ³Department of Medicine, Hospital Tuanku Jaafar, Negeri Sembilan; ⁴Department of Medicine, Raja Permaisuri Bainun Hospital, Ipoh, Perak; ⁵Department of Medicine, Putrajaya Hospital, Putrajaya; ⁶Department of Medicine, Penang Hospital, Pulau Pinang; ⁷Department of Medicine, Malacca Hospital, Malacca; ⁸Department of Medicine, Hospital Tengku Ampuan Afzan, Kuantan, Pahang; ⁹Department of Medicine, Hospital Sultanah Nur Zahirah, Kuala Terengganu, Terengganu; ¹⁰Department of Medicine, Hospital Raja Perempuan Zainab II, Kota Bharu, Kelantan; ¹¹Department of Medicine, Hospital Sultan Ismail, Johor Bahru; ¹²Department of Medicine, Hospital Sultanah Bahiyah; ¹³Department of Medicine, Hospital Sultanah Bahiyah, Alor Setar, Kedah; ¹⁴Department of Medicine, Sarawak General Hospital; ¹⁵Department of Medicine, Sibul Hospital, Sarawak; ¹⁶Department of Medicine, Queen Elizabeth Hospital, Sabah; ¹⁷Department of Medicine, Sultanah Fatimah Specialist Hospital, Muar, Johor; ¹⁸Department of Medicine, Hospital Tengku Ampuan Rahimah, Klang, Selangor; ¹⁹Department of Medicine, Selayang Hospital, Selayang, Selangor; ²⁰Federal Government Administrative Center, Ministry of Health Malaysia, Putrajaya, Malaysia

Background: Ankylosing spondylitis (AS) is a chronic spinal inflammatory disorder which leads to progressive fusion and deformity. The loss of spinal mobility is recognised as an important clinical sign. The BASMI, a composite index of spinal mobility is used internationally in clinical practice and research. However, the interpretation of BASMI has been impeded by the absence of normative values.

Objectives: We aimed to attain the normative values for BASMI in Malaysian healthy individuals.

Methods: BASMI data of 142 healthy individuals and 187 AS patients were analysed. Each BASMI component was assessed, using the 10-point scoring system, where zero is no mobility and 10 is very severe limitation. Measurements were performed by the rheumatologists and trained researchers following a designated protocol. Data were summarised and analysed according to sex and age groups.

Results: The total BASMI scores ranged from 0.2 to 4.2 and 0.6 to 9.6 in the healthy individuals and the AS cases, respectively. There was no significant difference for the BASMI median score between healthy men and women (men=1.2, women=1.6, $p>0.05$). The estimated median score for healthy individuals aged 15–19 years was 1.2, increasing with age to 2.7 for healthy individuals aged ≥ 60