THU0661

RISK OF PSORIASIS, CROHN'S DISEASE, ULCERATIVE COLITIS AND ANKYLOSING SPONDYLITIS IN PATIENTS WITH UVEITIS: A NATIONWIDE, POPULATION-BASED COHORT STUDY

Hsin-Hua Chen^{1,2}, Tsu-Yi Hsieh^{2,3}, Ching-Heng Lin¹, Yi-Ming Chen^{1,2}, Kuo-Lung Lai², Der-Yuan Chen⁴. ¹Taichung Veterans General Hospital, Department of Medical Research, Taichung, Taiwan, Republic of China; ²Taichung Veterans General Hospital, Division of Allergy, Immunology and Rheumatology, Department of Internal Medicine, Taichung, Taiwan, Republic of China; ³Taichung Veterans General Hospital, Department of Medical Education, Taichung, Taiwan, Republic of China; ⁴China Medical University Hospital, Rheumatology and Immunology Center, Taichung, Taiwan, Republic of China

Background: A recent study showed that the risk of ankylosing spondylitis (AS) was increased in patients with uveitis.⁽¹⁾

Objectives: The study aimed to test the risk of psoriasis (PsO), Crohn's disease (CD), ulcerative colitis (UC) and AS in uveitis patients.

Methods: The data source of this study was the 2003–2012 claims data from the Taiwanese National Health Insurance Research Database. We identified 4,943 incident patients with uveitis defined as having ≥ 2 ambulatory or ≥ 1 inpatient visits with a diagnosis of ICD-9-CM 360.12, 364.00–364.02, 364.04–364.05 or 364.3 made by an ophthalmologist from 2006 to 2012 after excluding those having prior PsO (ICD-9-CM 696.1), PsA (ICD-9-CM 696.0), CD (ICD-9-CM 555), UC (ICD-9-CM 556) or AS (ICD-9-CM 720) and randomly selected 49,430 non-uveitis individuals matching (1:10) uveitis cases for age, sex and the year of the index date from a one million representative population. We estimated the incidence rates of PsO (diagnosed by dermatologists), CD, UC and AS for the uveitis and non-uveitis cohorts, and the incidence rate ratios (IRR) and hazard ratios (HRs) after adjusting for sex, age, Charlson comorbidity index and concomitant medications.

Results: No incident case of CD was identified in uveitis patients and non-uveitis individuals. Compared with non-uveitis individuals, patients with uveitis had significantly higher incidence rates of PsO (IRR, 8.82; 95% CI, 6.80–11.43), CD (IRR, 7.23; 95% CI, 1.21–43.27) and AS (IRR, 171.69; 95% CI, 143.15–205.93). However, after adjusting for potential confounders, uveitis patients had a significantly higher risk of developing PsO and AS, but not CD.

Conclusion: This nationwide, population-based cohort study revealed that uveitis patients had an increased risk of PsO and AS, but not CD.

REFERENCES:

- [1] Varkas G, Vastesaeger N, Cypers H, Colman R, Renson T, Praet LV, et al. Association of Inflammatory Bowel Disease and Acute Anterior Uveitis, but Not Psoriasis, With Disease Duration in Patients With Axial Spondyloarthritis: Results From Two Belgian Nationwide Axial Spondyloarthritis Cohorts. *Arthritis Rheumatol*. 2018;70(10):1588-96.

Table 1. The associations between covariates with psoriasis, ankylosing spondylitis, Crohn's disease and traffic accident shown as adjusted hazard ratios with 95% confidence intervals estimated by Cox regression analyses

Covariate	Psoriasis	Ankylosing spondylitis	Crohn's disease
Uveitis	13.73 (10.30–18.31)	232.22 (192.29–280.44)	4.06 (0.46–36.13)
Age	1.02 (1.01–1.03)	0.96 (0.96–0.96)	0.99 (0.94–1.05)
Male	2.37 (1.82–3.09)	1.83 (1.66–2.03)	1.01 (0.17–6.18)
Charlson comorbidity index	0.97 (0.85–1.11)	0.56 (0.51–0.62)	1.45 (0.96–2.18)
Concomitant medication			
DMARD	0.39 (0.24–0.63)	1.32 (1.19–1.47)	0.65 (0.04–10.37)
Immunosuppressant	0.55 (0.17–1.76)	0.29 (0.21–0.40)	5.76 (0.43–77.61)
Corticosteroid	0.57 (0.43–0.74)	0.55 (0.49–0.60)	2.45 (0.24–24.55)

Acknowledgement: We thank the Biostatistics Task Force of Taichung Veterans General Hospital, Taichung, Taiwan, ROC for statistical support.

Disclosure of Interests: Hsin-Hua Chen Speakers bureau: Johnson & Johnson, Novartis, Pfizer, Abbvie, Roche, UCB, Bristol-Myers Squibb, Chugai, Tsu-Yi Hsieh: None declared, Ching-Heng Lin: None declared, Yi-Ming Chen Grant/research support from: GSK, Pfizer, BMS, Astra & Zeneca, Consultant for: Pfizer, Novartis, Abbvie, Johnson & Johnson, BMS, Roche, Sanofi, MSD, Guigai, Astellas Inova Diagnostics, UCB Agnitio Science Technology, United Biopharma, Thermo Fisher, Paid instructor for: Pfizer, Novartis, Abbvie, Johnson & Johnson, BMS, Roche, Astra & Zeneca, Sanofi, MSD, Guigai, Astellas UCB Thermo Fisher, Speakers bureau: Pfizer, Novartis, Abbvie, Johnson & Johnson, BMS, Roche, Lilly,

GSK, Astra & Zeneca, Sanofi, MSD, Guigai, Astellas UCB Thermo Fisher, Kuo-Lung Lai: None declared, Der-Yuan Chen: None declared
DOI: 10.1136/annrheumdis-2019-eular.361

THU0662

THE FREQUENCY OF MULTIPLE MYELOMA IN PATIENTS WITH ELEVATED ACUTE PHASE RESPONSE AND LOW BACK PAIN IN A RHEUMATOLOGY OUTPATIENT CLINIC

Fulya Cosan, Yavuz Furuncuoglu, Meis Timuroglu, Mohammed Raid Oyiwe, Osman Kara. *Bahcesehir University, Faculty of Medicine, Internal Medicine, Istanbul, Turkey*

Background: Multiple myeloma (MM), is a malignant hematological monoclonal neoplasm of plasma cells. Main clinical findings of MM are anemia, bone pain, elevated erythrocyte sedimentation rate and CRP levels, M-spike on protein electrophoresis, monoclonal protein in serum or urine. Anemia, low back pain and elevated acute phase reactants are frequently seen symptoms of patients who admit to a rheumatology outpatient.

Objectives: We aimed in this study to evaluate the frequency of plasma cell malignancies in patient with elevated acute phase reactants and low back pain.

Methods: 4100 rheumatology patients from rheumatology outpatient clinic are screened retrospective for >50 age, elevated ESR, anemia and back pain or hip pain. 548 patients (312 female and 236 male, mean age: 61 $\pm$ 6) fulfilled these criteria and these patients are screened with protein electrophoresis for monoclonal gammopathies. If M-spike is seen in protein electrophoresis, patients are evaluated for lambda and kappa chains in serum and urine.

Results: 3 patients were diagnosed for multiple myeloma. All three patients had moderate to severe anemia (Hgb<8 g/dl) and ESR>70 mm/h. Two patients are classified as rheumatoid arthritis and one patient had no inflammatory rheumatological diseases. 7 patients were diagnosed as MGUS and 5 patients from this group is diagnosed as rheumatoid arthritis and 2 patient polymyalgia rheumatica. In MGUS patient group mean ESR level was 44 $\pm$ 9 mm/h and mean Hgb level was 10.8 $\pm$ 6 g/dl.

Conclusion: We found no increased frequency for MM in rheumatology outpatient clinic. Patients >50 years with high ESR and moderate to severe anemia should be screened with protein electrophoresis for monoclonal gammopathies.

REFERENCES:

- [1] A population study to define the incidence and survival of multiple myeloma in a National Health Service Region in UK. Phokoo KJ et al. *Br J Haematol*. (2004)

Disclosure of Interests: None declared

DOI: 10.1136/annrheumdis-2019-eular.7878

THU0663

DO ANTIBODIES DIRECTED AGAINST HUMAN CILIARY BODY TISSUE PREDICT THE DEVELOPMENT OF UVEITIS IN JIA- A PRELIMINARY STUDY

Amal El Bana¹, Eszter Emri¹, Imre Lengyel¹, Madeleine Rooney². ¹Queens university of Belfast, Centre for Experimental Medicine, Belfast, United Kingdom; ²Queens University of Belfast, Centre for Experimental Medicine, Belfast, United Kingdom

Background: Eleven -30% of Juvenile Idiopathic arthritis (JIA) children develop uveitis. JIA associated uveitis is completely asymptomatic and thus all children with oligo/extended oligo and polyarticular JIA require regular slit lamp examination by an ophthalmologist— a time consuming and distressing procedure particularly for small children. If not diagnosed early, or inadequately treated, it may lead to glaucoma, cataracts, persistent cystoid macular oedema and ultimately results in visual impairment and blindness. Whilst Anti- nuclear antibody positivity is found more commonly in those with uveitis, it is not sufficiently sensitive or specific as a screening tool. However the presence of these antibodies and the detection of B cells in the inflammatory infiltrate around the ciliary body in JIA Uveitis suggests a significant role for humoral mediated immune dysregulation in the pathogenesis of JIA

Objectives:

1. Does the serum from Children with JIA associated uveitis contain antibodies directed against the ciliary body tissue of the human eye?
2. Could these be used to identify JIA patients at risk of developing uveitis?

Methods: Whole human globe were formalin fixed paraffin embedded and 4um sections were obtained. Following blocking with Goat sera blocking,

sections were incubated with JIA sera from children with and without uveitis (1:50 in PBT) for 1h.

Secondary antibody (goat anti-human IgG-488).DAPI counterstaining was used

Sections analysed by EE, using a Leica SP8 confocal microscope using LAS software. The operator was blinded to the status of the patient

Results: Sera from 13 patients were analysed: 5 with uveitis and 8 with no uveitis. Six had oligo JIA; 3 extended Oligo; 4 Poly JIA. Four were ANA -ve; 8 ANA+ve Max titre1/80 (using HEp2 cells); 1 unknown. Treatment: Seven NSAID; 1 MTX; 2 MTX and Pred; 3 Biologics. 5 Topical steroids

All tissue sections were analyzed blindly. Of the 5 patients with Uveitis 3 had antibodies against ciliary antigens and 2 did not. Of the 8 patients without uveitis 2 had antibodies against ciliary antigens and 6 did not. Fig 1 demonstrates immune histochemical findings from 2 typical patient's sera. No patient had high titres of antinuclear antibodies and there was no association between ANA positivity and ciliary body positivity. Fluorescent intensity was also higher in the Uveitis +ve patients Fig 2.

Fig 1 Ciliary body antibody detection in serum of patients with and without uveitis

Fig 2 Mean fluorescent intensity between Uveitis and Non Uveitis labelling

Conclusion: This preliminary work suggests that antibodies to ciliary body proteins may be valuable in identifying patients with JIA at risk of developing uveitis with 60% of those with uveitis being antibody positive compared with only 25% of those without uveitis. Concurrent treatment may alter the presence of antibodies in the serum and may also have suppressed the development of uveitis in those patients who were antibody positive yet had not developed uveitis. Antibody patterning within the ciliary body may also provide further useful information. We are currently studying a further group of patients who have not received immunosuppressive drugs

Disclosure of Interests: None declared

DOI: 10.1136/annrheumdis-2019-eular.7045

THU0664

THE ABSOLUTE RISK OF CLINICALLY DIAGNOSED GOUT BY CLUSTERS OF GOUT ASSOCIATED COMORBIDITIES AND LIFESTYLE FACTORS – RESULTS FROM 30 YEARS FOLLOW-UP OF THE MALMÖ PREVENTIVE PROJECT COHORT IN SOUTHERN SWEDEN

Tahzeeb Fatima¹, Peter Nilsson², Carl Turesson², Mats Dehlin¹, Nicola Dalbeth³, Lennart T.H. Jacobsson¹, Meliha C Kapetanovic². ¹University of Gothenburg, Dept of Rheumatology and Inflammation Research, Gothenburg, Sweden; ²Lund University, Dept of Clinical Sciences, Malmö, Sweden; ³University of Auckland, Dept of Medicine, Auckland, New Zealand

Background: Clinical gout is predicted by a number of factors. Several of these (comorbidities and lifestyle) have been shown to cluster in gout

patients^{1,2} indicating several different pathophysiological pathways, but it is not known if and to what extent such clusters predict gout.

Objectives: To examine; 1) the prevalence of comorbidity clusters in the population and 2) the long-term absolute and relative risks for developing gout in these clusters defined at baseline in subjects of Malmö Preventive Project (MPP).

Methods: The MPP is a screening program for cardiovascular risk factors, alcohol abuse and breast cancer in Malmö, Sweden. A total of 33,346 individuals (67% male, age=45.7 years, mean follow-up=28.2 years), screened between 1974 and 1992, participated. Date of gout diagnosis was defined as the first visit with gout (using ICD-codes) to physicians within primary or specialized care, through linkage of the MPP cohort with regional and national health care registers. End of follow-up was defined as the date of first gout diagnosis, death, moving from the area or December 31st, 2014. Hierarchical clustering was performed in a subset of 22,057 individuals (screening period: 1975-1992) to group observations. Variables clustered included obesity, renal dysfunction, diabetes mellitus (DM), hypertension, cardiovascular disease (CVD), dyslipidemia, pulmonary dysfunction (PD), smoking and use of diuretics. For the five identified clusters, their population prevalence as well as the incidence and hazard ratio (HR) for gout were computed using cox-proportional hazard analysis in Rv3.5.2.

Results: Cluster-1 (C1) with “few comorbidities” was by far the most common in the population (73%), followed by cluster-4 (C4) characterized by “obesity and hyperlipidaemia” (17%). These two pathways included 86% of incident gout cases during the follow-up. The four clusters (C2-5) identified by different comorbidity patterns all resulted in a 2-3-fold increased risk for incident gout. The highest incidence for gout was seen for cluster-2 (C2) characterized by “renal dysfunction” and cluster-3 (C3) characterized by “cardiovascular disease” (Table).

Table Incidence and hazard ratios for gout in observation-clusters of MPP cohort

Cluster name	Main characteristics	Occurrence, n (%)	Incident gout (n)	Incidence* (per 100,000 person-years at risk)	HR (95% CI) ^o
C1 Few comorbidities	No history of diabetes, CVD or renal disease.	16063 (72.8)	551	119	1
C2 Renal dysfunction	Renal dysfunction (100%), higher age at inclusion	750 (3.4)	53	269	2.31 (1.73-3.07)
C3 Cardiovascular disease and alcohol risk behaviour lifestyle	High frequency of CVD (100%), smoking (74%), alcohol risk behaviour (40%) & PD (22%)	528 (2.4)	26	224	2.41 (1.63-3.58)
C4 Obesity and hyperlipidaemia	High frequency of obesity (34%) & hyperlipidemia (74%)	3673 (16.7)	235	235	2.02 (1.73-2.35)
C5 Diabetes mellitus and hypertension	High frequency of DM (51%), hypertension (53%) & diuretics use (52%)	1043 (4.7)	45	184	1.98 (1.46-2.68)

*Incidence per 100,000 person-years at risk, ^oAdjusted for age, sex

Conclusion: In a population-based study, we identified five clusters based on gout-related comorbidities. Most gout cases occurred in the cluster characterized by few comorbidities. Such cases may have predisposing factors not captured by comorbidity patterns, e.g. genetics related to serum urate. In addition, we identified four pathways each defined by different comorbidity patterns and contributing to increased risk for gout, pathways that may require partly individual interventional strategies.

REFERENCES:

- [1] Richette P, et al. Ann Rheum Dis 2015; 74(1):142-47.
- [2] Megan B, et al. Rheumatol 2018; 57(8):1358-63.

Disclosure of Interests: Tahzeeb Fatima: None declared, Peter Nilsson: None declared, Carl Turesson: None declared, Mats Dehlin: None declared, Nicola Dalbeth Grant/research support from: Amgen, AstraZeneca, Consultant for: Horizon, Hengrui, Kowa, Speakers bureau: Pfizer, Horizon, Janssen, AbbVie, Lennart T.H. Jacobsson Consultant for: LJ has received lecture and consulting fees from Pfizer, Abbvie, Novartis, Eli-Lilly and Janssen, Meliha C Kapetanovic: None declared

DOI: 10.1136/annrheumdis-2019-eular.5515

THU0665

PREVALENCE OF RHEUMATIC DISEASES IN COLOMBIA: AN APPROACH FROM MINISTRY OF HEALTH AND SOCIAL PROTECTION DATA (SISPRO)

Daniel G. Fernández-Ávila¹, Santiago Bernal-Macias², Diana Rincón³, Juan Gutiérrez¹. ¹Pontificia Universidad Javeriana – Hospital Universitario San Ignacio, Internal Medicine – Rheumatology, Cra 7 No. 40-62, Colombia; ²Pontificia Universidad Javeriana – Hospital Universitario San Ignacio, Internal Medicine, Bogotá, Colombia; ³Universidad Militar Nueva Granada – Hospital Militar Central, Rheumatology, Carrera 5 No 49-00, Colombia

Background: The ministry of health and social protection of Colombia uses a system named SISPRO as a tool to establish the basic information of the health system. This information is public and available for anyone to search. We analyze the prevalence and specific characteristics of patients with rheumatic diseases registered in colombian health system between 2012 to 2016.

Objectives: To establish the prevalence and basic epidemiological characteristics of the main rheumatic diseases in Colombia

Methods: This is a descriptive epidemiological study using the International Statistical Classification of Diseases and Related Health Problem (CDI), as keywords for each rheumatic disease during the analysis of SISPRO data and National Statistical System (DANE) populations projections, as from the last census in Colombia to estimated prevalence of each disease.

Results: Colombia is a middle-income country with an estimated population of 49.834.240 habitants to 2018 according to 2005 census projections. Despite some limitations of SISPRO data, actually is the only official database of the government. We calculate the estimated prevalence and number of patients with some rheumatic diseases (table 1), confirming that autoimmune diseases are more frequent in woman, and surprisingly, spondyloarthritis (ankylosing, psoriasis and inflammatory bowel disease) are also discretely more frequent in woman population.

	Total cases	Prevalence (%)	Ratio woman: man
Rheumatoid arthritis	248.995	0,520	4,71 : 1
Ankylosing spondylitis	84.356	0,177	2,71 : 1
Gout	70.881	0,149	0,25 : 1
Sjögren syndrome	58.680	0,123	4,63 : 1
Systemic lupus erythematosus	41.804	0,088	4,17 : 1
Polymyalgia rheumatic	35.331	0,070	6,69 : 1
Sjögren syndrome	10.473	0,022	3,22 : 1
Inflammatory miopathy	8.498	0,018	1,76 : 1
Psoriatic arthritis	1.670	0,004	1,32 : 1
Granulomatosis with polyangiitis	750	0,002	7,44 : 1
Beçhet Disease	523	0,001	2,15 : 1
Churg Strauss disease (EGPA)	186	0,0001	2,24 : 1

Table 1. Prevalence of rheumatic diseases in Colombia

Conclusion: Epidemiological and prevalence information of rheumatic diseases in Colombia is presented. The data found in the present study are concordant with epidemiological studies in other countries.

Disclosure of Interests: : None declared

DOI: 10.1136/annrheumdis-2019-eular.6955

THU0666

SERIOUS/AT LEAST MODERATE INFECTIONS IN PATIENTS WITH JUVENILE IDIOPATHIC ARTHRITIS ON SYNTHETIC AND BIOLOGIC DRUGS FROM THE PHARMACHILD REGISTRY

Gabriella Giancane, Joost F. Swart, Nikolay Tzaribachev, Nadina Rubio, Ruben Cuttica, Ingrida Rumba-Rozenfelde, Wafaa Mohammed Saad Suwairi, Calin Lazar, Yosef Uziel, Albena Telcharova, Tadej Avcin, Angela Minaici, Claudio Len, Stella Maris Garay, Alina Boteanu, Angela Pistorio, Nico Wulfraat, Nicolino Ruperto, Paediatric Rheumatology International Trials Organisation (PRINTO). IRCCS Istituto Giannina Gaslini, Clinica Pediatrica e Reumatologia, PRINTO, Genoa, Italy

Background: Infections are a major concern for patients affected by juvenile idiopathic arthritis (JIA) treated with immunosuppressive therapy. Evidence is inconsistent as to whether the start of synthetic or biological disease modifying anti-rheumatic drugs (DMARDs) is associated with an increased risk of serious and at least moderate infection.

Objectives: To determine whether the addition of a TNF inhibitor (TNFi) to methotrexate (MTX) may increase the risk of serious and at least moderate infections in JIA patients included in the Pharmachild registry.

(1)

Methods: Serious and at least moderate infections were analysed in JIA patients, enrolled in the Pharmachild registry at September 30th, 2018, who started as first drug with MTX. We divided patients in 3 treatment groups: "MTX alone", in which patients had received MTX as the only drug all over their history; "MTX Start", in which patients had received MTX as first drug; "MTX+TNFi" for those patients who received a TNFi in addition to MTX after a period of "MTX Start". All the 3 groups were pure, since they received only these drugs. We considered initial infections as related to the treatment if the infection occurred in the drug period or within 90 days after treatment stop.(2) For the group "MTX Start", infection was related to treatment if occurring in the drug period stopped as soon as the second drug was introduced. For the group "MTX+TNFi", we considered all the possible correlations between start and end dates of the two drugs, including the time lag of 90 days after any treatment stop. If the interval between two drugs was shorter than 90 days, treatment was considered continuous. Crude rates (number of infections divided by drug exposure, excluding off-drug periods) and true incidence rates (number of first infections divided by the time lag between first drug administration and the date of the infection if the patient experienced the infection, the last Pharmachild visit if the patient didn't experience the event) were calculated.

Results: We enrolled in Pharmachild a total of 8061 patients who experienced 1686 infections. We excluded 41 patients who had infections before any treatment start. Of the final number of 8020 patients, we considered: 1226 patients in the group "MTX alone", 3128 in the group "MTX start" and 1026 in the group "MTX+TNFi". 7.7% of the patients in the "MTX alone" group, 2.7% of the patients in the "MTX Start" group and 7.0% of the patients in the "MTX+TNFi" group experienced at least one infection. Crude rates of infections per 1000 person-years resulted: 48.0 for the group "MTX alone", 22.0 for "MTX Start", 74.0 for "MTX +TNFi". Incidence rates per 1000 person-years were: 32.0 for the group "MTX alone", 17.0 for "MTX Start", 59.5 for "MTX+TNFi". The percentage of drug exposure on the patient follow-up was variable among the 3 treatment groups (from 15.6% for the "MTX+TNFi" group to 51.5% for the "MTX alone" group).

Conclusion: Pharmachild showed, through the analysis of pure treatment groups, that the addition of the anti-TNF biologic to MTX even triples the incidence rate of infections.

REFERENCES:

[1] Swart, et al. Arthritis Res Ther. 2018;20:285; (2) Dixon WG, et al. Arthritis&Rheumatism 56:2896–2904.

Disclosure of Interests: Gabriella Giancane: None declared, Joost F. Swart: None declared, Nikolay Tzaribachev: None declared, Nadina Rubio: None declared, Ruben Cuttica Grant/research support from: Roche, Pfizer, Lilly, Bristol Myers Squibb, Novartis, Sanofi Aventis, UCB, Janssen., Consultant for: Roche, Pfizer, Lilly, Bristol Myers Squibb, Novartis, Sanofi Aventis, UCB, Janssen., Speakers bureau: Roche, Pfizer, Lilly, Bristol Myers Squibb, Novartis, Sanofi Aventis, UCB, Janssen., Ingrida Rumba-Rozenfelde: None declared, Wafaa Mohammed Saad Suwairi: None declared, Calin Lazar: None declared, Yosef Uziel: None declared, Albena Telcharova: None declared, Tadej Avcin: None declared, Angela Minaici: None declared, Claudio Len: None declared, Stella Maris Garay: None declared, Alina Boteanu: None declared, Angela Pistorio: None declared, Nico Wulfraat: None declared, Nicolino Ruperto Grant/research support from: The Gaslini Hospital, where NR works as full-time public employee, has received contributions (> 10.000 USD each) from the following industries in the last 3 years: BMS, Eli-Lilly, GlaxoSmithKline, F Hoffmann-La Roche, Janssen, Novartis, Pfizer, Sobi. This funding has been reinvested for the research activities of the hospital in a fully independent manner, without any commitment with third parties., Consultant for: Received honoraria for consultancies or speaker bureaus (< 10.000 USD each) from the following pharmaceutical companies in the past 3 years: Ablynx, AbbVie, Astrazeneca-Medimmune, Biogen, Boehringer, Bristol-Myers Squibb, Eli-Lilly, EMD Serono, GlaxoSmithKline, Hoffmann-La Roche, Janssen, Merck, Novartis, Pfizer, R-Pharma, SanofiServier, Sinergie, Sobi and Takeda., Speakers bureau: Received honoraria for consultancies or speaker bureaus (< 10.000 USD each) from the following pharmaceutical companies in the past 3 years: Ablynx, AbbVie, Astrazeneca-Medimmune, Biogen, Boehringer, Bristol-Myers Squibb, Eli-Lilly, EMD Serono, GlaxoSmithKline, Hoffmann-La Roche, Janssen, Merck, Novartis, Pfizer, R-Pharma, SanofiServier, Sinergie, Sobi and Takeda.

DOI: 10.1136/annrheumdis-2019-eular.6773