according to Kerr index (≥ 2), and had also evidence of active disease at PET/CT. Table 1 summarizes the main results of our study. Despite RTX treatment, 4 of the 7 patients had evidence of persistent disease activity and/or radiographic disease progression during follow-up. Three out of 7 patients in whom RTX was employed as rescue therapy achieved complete remission.

Conclusions: Our data do not support a role for RTX as first line biologic therapy in TAK patients, but it may have a role in some patients as second/third line biological therapy.

References:

[1] Hoyer BF et al. Takayasu arteritis is characterised by disturbances of B cell homeostasis and responds to B cell depletion therapy with rituximab. *Ann Rheum Dis* 2012;71:75–9. doi:10.1136/ard.2011.153007.

Disclosure of Interest: None declared

DOI: 10.1136/annrheumdis-2017-eular.5158

AB0564 **TEMPORAL ARTERITIS: IS THERE ANY CORRELATION BETWEEN ULTRASONOGRAPHIC ARTERIAL WALL INVOLVEMENT AND THE INFLAMMATORY CELLULAR INFILTRATE AT HISTOLOGICAL EXAMINATION?**

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Background: Ultrasonographic alterations such as the halo sign and the compression test are now accepted as surrogate markers of artery inflammation. No data have yet been published on the correlation between the ultrasonographic grading of arterial wall inflammation and the grading of cellular infiltrate.

Objectives: To compare a semiquantitative ultrasonographic grading (USG) of TA involvement (halo sign and media-intima thickness) with a semiquantitative grading of the inflammatory burden in patients with giant cell (temporal) arteritis (GCA).

Methods: Fifteen consecutive patients with new onset clinical symptoms and satisfying ACR criteria for GCA, with positive halo sign in the frontal branch and positive temporal artery biopsy have been enrolled. For each patients we performed power Doppler ultrasonography of temporal artery with a 18–6 MHz linear probe (Esaote MyLab 70) and measured the maximum halo thickness of TA frontal branch in a quantitative and semiquantitative (0–3) grade of involvement (0 = <0.37 mm, 1 = in between 0.38–0.44, 2 = 0.45–0.6 mm, 3 = >0.6). TA biopsy was done in the same frontal branch evaluated with US. Then we compared the ultrasonographic data with a semiquantitative (0: absent, 1: mild, 2: moderate, 3: severe) grading of the transmural cellular inflammatory infiltrate and with the intima-media thickness of the TA biopsy specimen. Moreover US results were correlated with the other patterns of histological alterations (giant cells, calcifications, laminar necrosis). Correlation between variables was done by Rho of Spearman method.

Ultrasonography of temporal artery: grading of Halo thickness

Grading of the transmural cellular inflammatory infiltrate and intima-media thickness of the TA biopsy.

Results: 15 patients, 6 males and 9 females (mean age 71.6±7 years – duration symptoms at onset 1.7±1.3 months – mean ESR 60 mm/h ±29 – mean CRP 8 mg/dl ± 5.2) entered the study. US halo sign was bilateral in 10/15 (66,7%). The mean halo thickness was 0.53 mm ± 0.12. Five patients had USG =1, six patients =2 and four patients =3. The histological inflammatory grade 1 was present in seven pts, grade 2 in four and grade 3 in four pts. No significant correlation were found between USG and histological inflammatory grade, nor with the presence of giant cells, calcifications, laminar necrosis and intima-media thickness.

Conclusions: No correlation has been found between the size of the halo sign and the histological inflammatory grading.

Disclosure of Interest: None declared

DOI: 10.1136/annrheumdis-2017-eular.5093

AB0565 **INSUFFICIENT INFLUENZA VACCINATION COVERAGE IN GIANT CELL ARTERITIS. A FRENCH POPULATION-BASED STUDY**

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Background: French general health insurance scheme has implemented a national influenza vaccination program, including full refund for those 65 years old or more. Despite this program, only 62.6 to 71% of people aged over 65 years are vaccinated and no data are available regarding influenza vaccination coverage (IVC) in GCA.

Objectives: To evaluate the rate and the factors associated with seasonal influenza vaccination coverage in incident giant cell arteritis (GCA) patients compared with controls.

Methods: Using the French National Health Insurance system (SNIIRAM), we included patients with incident GCA from the Midi-Pyrenees region, southern France, and randomly selected 6 controls matched by sex and age at calendar date from January 2005 to December 2008 and followed them till April 2011. The vaccination rate was estimated from vaccine dispensation registered in the SNIIRAM. IVC was compared between GCA and their controls using longitudinal multivariate Poisson regression.

Results: Eighty-seven incident GCA patients over 65 years of age and 509 in the control group were included. Mean follow-up was 4.4±1.2 and 4.2±1.2 years, respectively. During the yearly influenza campaigns from 2005–2006 to 2010–2011, the IVC rates in the GCA group and the control group ranged from 60.8 to 74.7% vs 56.6 to 70.4%, respectively. Incident GCA influenza vaccination rate was 20% higher than controls (RR=1.20; IC 1.09 to 1.32, P<0.001) (Table 1).

Table 1. Associated factors with recommended influenza vaccination (Multivariate longitudinal Poisson analysis)		Adjusted RR	IC 95%	P
GCA	GCA	1.20	1.09 - 1.32	< 0.001
Comorbidity at baseline				
- High blood pressure		1.13	1.04 - 1.24	0.006
Age, years	] 64.4 ; 71.5]	1		
	] 71.5 ; 80]	1.15	1 - 1.32	0.048
	] 80 ; 91.9]	1.13	0.99 - 1.29	0.079
Gender				
Female		1.05	0.96 - 1.16	0.259
Time, influenza campaigns	[2005 : 2008]	1		
	[2008 : 2010]	1.11	1.08 - 1.14	< 0.001
	[2010 : 2011]	1.05	1.02 - 1.08	0.002
	GCA * [2008 : 2010]	0.90	0.87 - 0.92	< 0.001
GCA*Time				
GCA * [2010 : 2011]		0.77	0.72 - 0.83	< 0.001

GCA: giant cell arteritis, RR: Relative Risk, CI: Confidence Interval. GCA *Time: the interaction term between to have GCA and time variable.

Conclusions: Rates of recommended influenza vaccinations are insufficient in GCA patients over 65 years. More attention should be paid for appropriate vaccination during GCA course.

Disclosure of Interest: None declared

DOI: 10.1136/annrheumdis-2017-eular.1814

AB0566 **18F-FDG-PET-POSITIVE TEMPORAL ARTERY IN GIANT CELL ARTERITIS: A POSSIBLE CORRELATION WITH HISTOPATHOLOGICAL FINDINGS**

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Background: Giant cell arteritis (GCA) a form of vasculitis in persons older than 50 years, in which cranial and systemic large vessels can be involved. ¹⁸F-fluorodeoxyglucose positron emission tomography - computed tomography (¹⁸F-FDG-PET-CT) is increasingly used to diagnose inflammation of the large arteries in GCA. But it is very rare to observe an inflammation of temporal arteries of GCA using ¹⁸F-FDG-PET.

Objectives: To understand the mechanism and frequency of the positive temporal artery of GCA in ^{18}F -FDG-PET.

Methods: This was a retrospective chart review of 3 patients with giant cell arteritis who underwent all of ^{18}F -FDG-PET, MRI, CT angiogram, ultrasound and histopathologic evaluation of temporal arteries. To investigate the cases of FDG-PET positive temporal arteries in GCA, a systematic literature review was done in Pubmed using ^{18}F -FDG-PET AND ("temporal arteritis" OR "giant cell arteritis").

Results: A case report: An 85-year-old male presented with muscle weakness. Three years before admission, he experienced pain in his neck and both extremities. Rheumatoid arthritis was diagnosed at another hospital, and the patient was treated with methotrexate and prednisolone, which resolved his symptoms. The medication was discontinued after 2 years. Two months before admission he began coughing due to interstitial pneumonitis, and later developed muscle weakness and difficulty walking. On admission a physical examination revealed swelling of the bilateral temporal arteries. A blood test showed accelerated ESR at 54mm/h and a CRP of 4.6 mg/dL. Ultrasound showed an increased diameter, hypoechoic wall thickening (halo), stenosis, and calcification of the arterial wall of the temporal artery. A contrast CT showed wall thickening in the affected segments, calcification, stenosis and enhancement of the soft tissue around the temporal artery. An ^{18}F -FDG-PET scan indicated increased uptake of ^{18}F -FDG at the temporal arteries whereas no uptake was found in the other arteries including the aorta and carotid arteries. A biopsy of the temporal artery revealed necrotizing vasculitis with a few giant cells and the formation of a microscopic neutrophilic abscess. When compared with 2 other cases of temporal arteritis with a negative ^{18}F -FDG uptake, the severity of inflammation and the number of giant cells in the present case were not remarkably high. A systematic literature review identified 4 cases of ^{18}F -FDG-PET positive temporal arteries in 454 cases of GCA of 82 papers. Of note, large arteries were positive for ^{18}F -FDG-PET in 253 cases of GCA in the same series.

Conclusions: The hierarchy for FDG uptake by resting inflammatory cells is neutrophil > macrophage = lymphocyte in vitro, indicating that the sites where neutrophils dominate are more likely to be visualized by ^{18}F -FDG PET in vivo. In addition to the known usefulness of ^{18}F -FDG-PET in visualizing inflammation in large vessels, the increased uptake of ^{18}F -FDG to the temporal artery may help to identify the neutrophilic inflammation.

Disclosure of Interest: None declared

DOI: 10.1136/annrheumdis-2017-eular.4171

AB0567 THE LONG TERM HEALTH RELATED QUALITY OF LIFE (HRQOL) IMPACT ON GIANT CELL ARTHRITIS (GCA) PATIENT

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Background: Health related quality of life (HRQOL) of Giant cell Arthritis (GCA) patients is important because it adds depth to our understanding of how a disease and its treatments affect them. Though only one previous study has addressed the short term impact of GCA on HRQOL, the long term impact has not fully been investigated.

Objectives: The aim of our study is to assess the long term HRQOL outcomes of GCA patients using the Japanese version of EuroQol 5 Dimension (EQ-5D).

Methods: 40 GCA patients who admitted to our hospital from November 2004 to June 2014 were enrolled. All patients were received prednisolone over 2 years. Patients who had lost their eyesight were excluded because vision concern for HRQOL nor it is difficult to measure by using EQ-5D. This is a retrospective study and data were collected by telephone interview. Patients evaluated their health status using five dimensions. The EQ-5D score were calculated based on the Japanese version of the value set. Primary outcome is the mortality rate and the norm of EQ-5D score. As a secondary analysis, we classified the patients as follows and compare the mortality rate and EQ-5D score between two groups.

Figure1: Kaplan Meier survival estimate

Group 1: GCA patients who received prednisolone over 5 years.

Group 2: GCA patients who received prednisolone less than 5 years.

Results: There were 16 male (40%) and 24 female (60%). The median age was 83.5 (95% CI 79.24–87.76). The mortality rate was 37.5% (15 patients). Kaplan-Meier curve is shown in Figure1. The median EQ-5D score was 0.746 (95% confidence interval [CI] 0.852–0.640) and it is lower than Japanese norm (0.853 in male and 0.808 in female). In the secondary analysis, the mortality rate was 56.0% (14 patients) in Group1 and 6.6% (1 patient) in Group2. It was significantly higher in Group 1 ($P<0.05$). The median EQ-5D score was 0.764 (95% CI 0.579–0.870) in Group1 versus 0.768 (95% CI 0.621–0.915) in Group2. There was no statistically significant difference between them ($P=0.813$).

Conclusions: This study focused on GCA patients with prednisolone therapy over 2 years. It showed that EQ-5D was decreased compared with the Japanese norm but it didn't clearly decrease after 2 years of treatment. These findings suggest the value of measuring health status in GCA patients by EQ-5D at least first 2 years of treatment, because it would allow comprehensive evaluation of the patient's health condition and add another dimension to the subjective symptoms and laboratory data.

References:

[1] Arthritis and Rheumatism Vol.49, No6, December 15, 2003, pp819–825.

[2] J Neuroophthalmol. 2001 Dec;21(4):266–73.

Disclosure of Interest: None declared

DOI: 10.1136/annrheumdis-2017-eular.3691

AB0568 APPLICATION OF OZONATED WATER IN ORAL ULCER PATIENTS WITH BEHCET'S DISEASE

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Background: Behcet's disease is a systemic vasculitis disease of unknown etiology. Oral ulcer is the most common symptoms, the ulcer is various, the swelling and pain is obvious, and it is easy to recurrent, these symptoms affected the patient's diet and life seriously. Therefore, it is important to care the patients with Behcet's disease of oral ulcer. The ozonated water had many functions such as immune activation and immune regulation, it can induce the production of many cytokines, promote the repairment of oral epithelium. At the same time, the ozonated water had a direct effect on the nerve endings, it played a better analgesic effect, it was widely used in oral mucositis which induced by chemotherapy. But there were few studies about application ozonated water in the patients with Behcet's disease of oral ulcer, it was not widely used in clinical practice.

Objectives: Apply the ozonated water in patients with Behcet's disease, observe the effectiveness in patients with Behcet's disease of oral ulcer.

Methods: From June 2014 to June 2016, 82 cases of hospitalized patients with Behcet's disease were randomly divided into study group and control group ($n=41$), the control group used nursing method of gentamycin sulfate solution and nystatin solution gargle alternatively, the research group using ozonated water gargle, observe and evaluate the healing effect of two groups of patients.

Results: The research group had significant improvement in healing oral ulcer and relieving pain ($P<0.05$).

Conclusions: Ozonated water had a perfect effect in patients with Behcet's disease of oral ulcer.

References:

[1] Wainstein J, Feldbrin Z, Boaz, M et al. Defficacy of ozone-oxygen therapy for the treatment of diabetic foot ulcers [J]. Diabetes Technol Ther 2011;31(12):1255–1260.

[2] Kim KI, Kim JW, Lee HJ, et al. Recombinant human epidermal growth factor on oral mucositis induced by intensive chemotherapy with stem cell transplantation [J]. Am J Hematol 2013;88(2):107–112.

[3] Xiaotong Yi. The effect of ozonated water on the anti-inflammatory and wound healing of infected wound [J]. Asia Pacific Traditional Chinese medicine, 2012;8(4):331–350.

[4] Xia Wu. Effect of different nursing methods in patients with Behcet's disease of oral ulcer [J]. Southwest Military 2010;12(3):571–572.

[5] Yuan Li, Zeju Yu, Shuling Yang, et al. Effect of ozone water treatment in oral ulcer which induced by radiotherapy [J]. Chinese Journal of nursing, 2012;18(24):2956–2957.

Disclosure of Interest: None declared

DOI: 10.1136/annrheumdis-2017-eular.3371

AB0569 CHANGE IN SERUM LEVEL OF SOLUBLE E-SELECTIN AND MMP-9 IN CHILDREN WITH KAWASAKI DISEASE

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Objectives: Kawasaki disease (KD) is a kind of febrile disorder without definite etiology. Coronary artery aneurysms are the major complication of Kawasaki disease (KD). The pathogenesis of the vascular damage remains unknown. This study was conducted to explore the pathophysiological role of E-selectin (ES), Matrix metalloproteinase 9 (MMP-9) in KD and to look for the evidence of direct relationship between the plasma levels of ES, MMP-9 and the incidence of the coronary artery lesion (CAL).