developing active tuberculosis (TB). It is essential to screen patients for latent TB before starting a biologic drug. Population is vaccinated with BCG in Turkey and BCG vaccination decreases the specifity of tuberculin skin test. QuantiFERON-TB Gold In-Tube Assay (QFT) is an another good option to screen latent TB.
Objectives: The objective of this study was to assess reliability of QFT test for latent TB before biological treatment.
Methods: Hacettepe University Rheumatology Biologic Registry (HUR-BIO) is a single center biological registry since 2005. Between Nov 2011 and July 2015, 1347 patients were assessed by QFT for latent TB. All consecutive patients were evaluated by a standard questionnaire between July 2015 and October 2016. This questionnaire included demographic characteristics, medical and treatment history, symptoms of active TB. 671 patients were assessed by the physicians. TB status of other 676 patients were checked from Turkish national tuberculosis registery records. It's an obligatory disposition for physicians to inform health ministery about TB cases and all TB patients must be recorded in those regitry. The mean TB incidance per year was calculated for every anti-TNF agents and non-TNF biological agents.
Results: Total 1347 (58.1% female) patients were recruited to study. Mean age was 42±12 years. Diagnosis were followed; RA 436 (32.4%), SpA 844 (62.5%), others 67 (5.1%). Total biological drug exposure was 2329 patient-years; adalimumab (660 years), etanercept (630 years), infliximab (426 years), golimumab (283 years), certolizumab (78 years), and total anti-TNF duration (2071 years). Non-TNFi exposure was 258 patient-years. Positive and indeterminate QFT results were found in 267 (19.8%) and 20 (1.5%) patients, respectively and those patients were prescribed INH prophylaxis. In addition, INH was prescribed to 37 (2.7%) patients according to chest X-Ray and physician decision. Pulmonary TB found in 3 of 1347 (0.22%) patients. TB was developed 38, 28 and 21 months after TNFi. The mean TB incidance per year was 128.8/100.000 for all biological drugs. The mean TB incidance per year according to QFT positive and negative patients were 181.8/100.000 vs 112.4/100.000.
Conclusions: According to QFT screening for latent TB, INH was started almost 20% of patients. However, if we used TST for latent TB test in BCG vaccinated countries, INH would started almost 70–80% of patients. Therefore QFT was a good tool for latent TB screening in BCG vaccinated countries. Consequently, QFT test seems acceptable to determinate latent TB during biological drug usage. In addition, TB incidance has increased almost 7 times of our national TB incidance.
Disclosure of Interest: None declared
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AB1024 ULTRASOUND IN GIANT CELL ARTERITIS: CUT-OFF AND PITFALLS IN THE HALO SIGN

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Background: At the age of presentation of Giant Cell Arteritis (GCA) atherosclerosis is common. The ultrasonographic (US) appearance of athermanous plaque is usually easily differentiated from the hypoechoic halo of GCA. However, the US appearance of the increased of the intima-media-thickness (IMT) in an atherosclerotic carotid artery may have similar image appearance as the halo sign. We hypothesize that atherosclerosis could produce an increase of temporal artery (TA) IMT and cause false-positives halo sign.
Objectives: The aim of this study was to explore the better cut-off in the IMT of TA to minimise the number of false-positive GCA diagnosis caused by atherosclerosis.
Methods: Consecutive non selected patients, ≥50 years-old with high vascular risk according to European Guidelines on cardiovascular disease prevention, and without signs or symptoms of GCA, were included.
Ultrasonography of carotid artery: Carotid US examinations were performed on a Mylab Seven (Esaote Medical Systems, Italy) with a 4–13 MHz linear-array. The system employed dedicated software radiofrequency-tracking technology to obtain IMT (QIMT®).
Ultrasonography of temporal superficial artery: A color Doppler ultrasound (CDU) and grey scale measure of the IMT/halo sign in both TA and its branches was performed by a second experienced sonographer. A Mylab Twice equipment (Esaote, Geneve, Italy) was used, with a 22 MHz frequency for grey scale and a 12.5 MHz for CDU (color gain of 51, PRF of 2 kHz). The sonographer was blind to the clinical and carotid ultrasound IMT data.
Results: Forty patients were studied, 28 men (70%), with a mean age of 70,6±6,9 years. Three patients were active smokers and 27 ex-smokers. Arterial hypertension was present in 39 (97.5%), dyslipidaemia in 34 (85%) and diabetes in 19 (47.5%). The mean erythrocyte sedimentation rate was 13.6±11.0. The table shows that an IMT >0.30 mm (halo sign) was seen in at least 1 TA branch of 18 patients (45%) with 33 TA branches affected (20.6%). An IMT cut-off >0.34 mm, was present in 4 patients (10%). When at least two affected branches with this measure were required to make the US diagnosis (criteria recommended to improve specificity) only one patient (2.5%) produced a false-positive halo sign.
Conclusions: To the best of our knowledge, this is the first communication indicating that atherosclerosis is a potential cause of false-positive halo sign. We propose a cut-off of AT IMT >0.34 mm in at least two branches to minimise the number of false positives in GCA diagnosis.
Disclosure of Interest: None declared

	Carotid IMT mm	Right		Left		Number of branches with halo	
		TA frontal	TA parietal	TA frontal	TA parietal	Cut-off IMT >0.3 mm	Cut-off IMT >0.34 mm
Patient 4	1.185	0.37	0.31	0.31	0.31	4	1
Patient 5	0.948	0.26	0.31	0.31	0.27	2	0
Patient 6	1.135	0.18	0.31	0.24	0.25	1	0
Patient 7	1.164	0.31	0.28	0.28	0.28	1	0
Patient 9	1.243	0.37	0.4	0.45	0.35	4	4
Patient 10	1.196	0.28	0.28	0.34	0.28	1	0
Patient 11	1.21	0.31	0.31	0.25	0.28	2	0
Patient 12	1.165	0.29	0.28	0.28	0.31	1	0
Patient 14	1.37	0.29	0.22	0.31	0.31	2	0
Patient 16	1.33	0.25	0.28	0.23	0.34	1	
Patient 17	1.027	0.28	0.32	0.37	0.34	3	1
Patient 18	0.989	0.25	0.31	0.28	0.28	1	0
Patient 19	1.017	0.19	0.28	0.25	0.31	1	0
Patient 25	0.802	0.29	0.27	0.31	0.25	1	0
Patient 30	1.200	0.31	0.29	0.21	0.24	1	0
Patient 32	0.978	0.31	0.3	0.36	0.25	3	1
Patient 35	0.766	0.23	0.28	0.33	0.29	1	0
Patient 37	1.048	0.34	0.33	0.27	0.31	3	0

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AB1025 THE SUPERB MICROVASCULAR IMAGING IS MORE SENSITIVE THAN CONVENTIONAL POWER DOPPLER IMAGING IN DETECTION OF ACTIVE SYNOVITIS IN RHEUMATOID ARTHRITIS PATIENTS

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Background: Precise evaluation of synovial inflammation and bony deformity is very important for the management of rheumatoid arthritis (RA). One of the most popular used methods to detect synovial inflammation and bony erosion is ultrasonography. Previous literatures revealed that US using power Doppler imaging (PDI) could detect more sensitive synovial inflammation than conventional radiography. However, there are still some limitations in ultrasonography. The superb microvascular imaging (SMI) is a new software technology introduced by Toshiba, which can detect a vascularity more sensitively without artifacts.
Objectives: In this prospective study, we evaluated the clinical usefulness of the SMI compared to PDI for the detection of active synovitis in patients with RA.
Methods: This prospective observational study includes 56 patients with RA (42 females; mean age,), from June 2015 to October 2016. The mean age of RA patients was 53.2±17.6 years, and 42 patients were female (75.0%). All the included patients underwent ultrasound about both wrists and hands (total 22 joints; wrist joints, metacarpophalangeal joints, and proximal interphalangeal joints). All the ultrasound examinations were performed at the volar side of the wrists and hands using both conventional PDI and SMI which use Aplio TM 500 Ultrasound (Toshiba Medical Systems Corporation). Their results were scored for each joint from grade 0 to grade 3 according to the vascularity (grade 0, no vascularity; grade 1, single vessel; grade 2, vascular flow less than 50% in field of view; grade 3, equal to 50% or more). The sum of grades for 22 joints was compared between PDI (PDI-sum) and SMI (SMI-sum). The correlation between the sum of grades values and inflammatory laboratory parameters including the erythrocyte sedimentation rate (ESR), C-reactive protein (CRP), and disease activity score 28 (DAS28) were also evaluated.
Results: The mean values of ESR, CRP and DAS28 were 27.13±18.06 mm/hr, 6.78±9.14 mg/L, and 2.71±1.11 respectively. The positive rates of rheumatoid factor and anti-cyclic citrullinated antibody were 73.2% and 75.0%, respectively. The sum of grades for 22 joints was significantly higher in SMI-sum compared to PDI-sum (10.27±6.20 vs. 5.80±3.79, $p<0.001$). The SMI-sum was highly correlated with the PDI-sum score ($\gamma=0.800$, $p<0.001$). The SMI-sum showed positive correlation with DAS28, tender joint count, swollen joint count, visual analogue pain scale, and CRP level ($\gamma=0.486$, $p<0.001$; $\gamma=0.385$, $p=0.003$; $\gamma=0.467$, $p<0.001$; $\gamma=0.547$,$p<0.001$; $\gamma=0.351$, $p=0.008$, respectively). The number of clinical remission (DAS28 score below 2.6) was 28 (50.0%). The SMI-sum was significantly higher than PDI-sum in patients with clinical remission (7.96±5.39 vs. 4.64±3.03, $p<0.001$). All of the patients with clinical remission showed active synovitis at more than one joint in SMI.
Conclusions: SMI showed a more sensitive vascularity in RA patients than PDI. We could detect active synovitis through SMI in the RA patients with clinical remission. SMI could be a useful technology for the evaluation of synovitis in RA patients, especially for the detection of clinically subtle, but active synovitis in RA patients with remission.
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