ANKLE BRACHIAL INDEX FOR THE DIAGNOSIS OF SUBCLINICAL ATHEROSCLEROSIS USING CAROTID INTIMA MEDIA THICKNESS IN SYSTEMIC LUPUS ERYTHEMATOSUS PATIENT IN SANGHLAH HOSPITAL

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Background: Atherosclerosis and its complications in Systemic Lupus Erythematosus (SLE) patients occurred more rapidly than the general population. Early detection of atherosclerosis is currently a challenge for clinicians. Angiography as a gold standard diagnosis of atherosclerosis is invasive, has a limitation. The surrogate marker carotid intima media thickness (CIMT) examination with B-mode ultrasonography has been used widely and validated. The limitation of this examination is operator dependence. Ankle brachial index (ABI) examination is simpler, cheaper, objective and widely available and is expected to be used for the diagnosis of subclinical atherosclerosis.

Objectives: to determine the sensitivity, specificity, positive predictive value and negative predictive values of the ABI to establish the diagnosis of subclinical atherosclerosis in SLE patients.

Methods: A cross sectional study was enrolling 56 subjects and was conducted from September 2016 to July 2017 at Sanglah Hospital, Denpasar, Bali, Indonesia. We used 2 x 2 cross table to determine the sensitivity, specificity, positive predictive value and negative predictive values of ABI to establish the diagnosis of subclinical atherosclerosis.

Results: Of the 56 samples, 48 people (85.7%) were female. The area under ROC curve was 0.708 (70.8%), p=0.004. ABI examination to diagnose subclinical atherosclerosis in patients with SLE with a cutoff value of 0.95 has a sensitivity of 7%, specificity of 75%, 9.9% positive predictive value, and negative predictive value of 92.1%. The best cut-off value of ABI as a diagnostic tool for subclinical atherosclerosis in SLE patients is <0.95.

Conclusions: Examinations with ABI can be considered as an alternative diagnostic when CIMT is not available. The diagnostic value of ABI is reliable enough for screening and diagnostic confirmation of subclinical atherosclerosis in patients with SLE.

REFERENCES:

PET results supported a change in therapeutic management in 71.6% of the cases. In the group of sarcoidosis there was a change in treatment in 68.9% of cases. PET/TC revealed extrapulmonary manifestations in 57.8%. All patients with extracranial manifestations of giant cell arteritis (GCA) showed uptake in PET results supported a change in therapeutic management in 66.7% of cases. PET/TC showed uptake in 57.8% of cases. PET/TC detected extrapulmonary sarcoidosis in 57.8% of cases. PET/TC supported a change in therapeutic management in 57.8% of cases.

Conclusions: PET/TC is an increasingly utilised in our patients with inflammatory disorders as a support for the diagnosis and management. PET/TC detection of extrapulmonary sarcoidosis may have therapeutic and prognostic clinical implications. PET may be useful in patients with GCA suprachiasmatic with negative biopsy and extracranial symptoms. More studies will be necessary to establish the real role of PET/TC in autoimmune and inflammatory diseases.

Disclosure of Interest: None declared

UTILITY OF PET/CT FOR THE DIAGNOSIS AND DISEASE MANAGEMENT: A STUDY OF 88 PATIENTS FROM AN AUTOIMMUNE DISEASES HOSPITAL UNIT IN A 2-YEAR PERIOD

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Background: 18F-Fluorodeoxyglucose Positron Emission Tomography/Computed Tomography (18F-FDG PET/CT) is a non-invasive imaging technique commonly used in clinical oncology. 18F-FDG accumulation is recognised as useful for diagnosing and monitoring the response to therapy in patients with some inflammatory disorders, but the role of the PET/TC in the management of these diseases is debated.

Objectives: The aim of this study was to investigate the role of 18F-FDG PET/CT in the diagnosis of the disease and assessing disease activity in an autoimmune diseases unit, and to evaluate if the results of this image technique imply a change in clinical management.

Methods: We retrospectively reviewed all 18F-FDG PET/CT requested since August 2015 to August 2017 by our unit. Data collected were: patient demographics, reason for PET request, PET results and change in therapy.

Results: PET/CT were performed in 88 patients and were positive in 68 (77.3%) cases. Patients (49 women/39 men) had a mean age of 58 ±15.7 years (range, 27–92 years). The clinical diagnosis at the moment of ordering the PET/CT were: sarcoidosis (n=45), small-vessel vasculitis (LLV) (n=16), immunoglobulin G4-related disease (IgG4-RD) (n=9), collagen-vascular diseases (CVD) (n=7), mesenteric panniculitis (n=4), myopathy (n=4), polymyalgia rheumatica (PMR) (n=2) and ANCA-associated vasculitis (n=1). (See Table 1).

Disclosure of Interest: None declared
AstraZeneca and QIAGEN developed an in-vitro diagnostic test for interferon-inducible gene expression (IFIGx). Efficacy of anifrolumab will be evaluated in patients with high and low IFNGS. 

Objectives: We aimed to analytically validate the IFIGx kit for use in a pivotal clinical study and potentially to support future regulatory submission. 

Methods: The IFIGx kit measures expression of four interferon-inducible genes (IF127, IF114, IF114L and RSAD2) compared with three housekeeping genes. Measurements were performed on mRNA extracted from whole blood from adults with SLE. A score was generated that identified patients as "IFNGS test-high" or "IFNGS test-low." Analytical validation involved six studies measuring lot interchangability, linearity, repeatability, reproducibility, cross contamination, and system verification. 

Results: Repeatability was 100%. Reproducibility was >96%. No cross contamination was observed. Results of all studies validated the IFIGx kit (table 1).

Abstract AB1212 – Table 1

<table>
<thead>
<tr>
<th>Study</th>
<th>Description</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lot interchangeability</td>
<td>Verification that scores and assay Ct values were robust when different lots of kit components were used</td>
<td>Acceptance criterion was 0.58 Ct</td>
</tr>
<tr>
<td>Linearity</td>
<td>Verification, using linear and quadratic regression analyses, that mRNA input concentration (10 ng/μL) is in assay’s linear range</td>
<td>Linearity verified Change in score over the concentration range on either side of 10 ng/μL L&lt;0.0043 Ct</td>
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<tr>
<td>Reproducibility</td>
<td>Verification of Dx result repeatability when the same operator tested 60 random samples using the same kit lot and instrument</td>
<td>Reproducibility verified Overall rate=99.7% After six samples with values close to the cut-off were added for further confirmation, overall rate=96.5%</td>
</tr>
<tr>
<td>Cross contamination</td>
<td>Investigation of inter- and intra-run</td>
<td>No cross contamination found in cross contamination found in reverse transcription or PCR steps</td>
</tr>
<tr>
<td>System verification</td>
<td>Verification of functionality and utility of the IFIGx software and IFIGx assay package</td>
<td>System verification confirmed Software flags produced as expected</td>
</tr>
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</table>

Numbers are medians (IQR) and (n=11) * Mann-Whitney U-test. 

Conclusions: The IFIGx kit was shown to be a robust, reproducible diagnostic test for IFNGS. The IFIGx kit has demonstrated value in prior anifrolumab studies, and will be used for both patient stratification in Phase III studies and to support anifrolumab regulatory filings.

REFERENCE: 