Background and aims Long term complications and mortality of Systemic Lupus Erythematosus Systemic (SLE) are associated with vascular disease and atherosclerosis. Atherosclerosis is clinically preceded by changes in the walls of arteries, known as Intima Media Thickness (IMT) and plaque formation. IMT can be measured by B-mode ultrasonography of the carotid arteries. Atherosclerosis is an inflammatory process that was affected by inflammatory cytokines including TNF-α. The role of TNF-α is important in SLE disease, so it is important looking for correlation between plasma level of TNF-α with carotid artery IMT from SLE patient.

Objective To determine the correlation between plasma level of TNF-α with carotid artery IMT from SLE patient.

Methods Cross Sectional Study, the subjects of this study was 32 people, consisting of woman aged ≥18 years. Statistical test using unpaired t-test and Spearman rank correlation test.

Results From 32 subjects there were 20 subject (62.50%) have a carotid artery IMT. There were no significant differences in plasma levels of TNF-α to carotid artery IMT (p=0.0405, 95% CI -2.34 until 5.64), no significant correlation between plasma levels of TNF-α with carotid artery IMT (p=0.075; r=-0.319) in SLE patient. We compare subject with carotid artery IMT which have high and low plasma levels of TNF-α is same (31.25% vs 31.25%).

Conclusions There were no significant differences and no significant correlation between plasma levels of TNF-α with carotid artery IMT in SLE patient.

Background and aims Pulmonary hypertension is one of the most debilitating and fatal complications of systemic lupus erythematosus (SLE) and antiphospholipid syndrome (APS). These patients are prone to chronic thromboembolic pulmonary hypertension (CTEPH), for which the treatment of choice is pulmonary endarterectomy (PEA). It is a complex surgical procedure with removal of obstructive thromboembolic material from the pulmonary arteries in order to reduce pulmonary vascular resistance, relieve pulmonary hypertension (PH) and alleviate right ventricular dysfunction. Hereby, we share our clinical experience of PEA for CTEPH in SLE and APS patients.

Methods Data were collected prospectively for consecutive patients with APS and SLE who underwent PEA over a 5 year period [2011–2016]. Case selection was made by consensus of a team consist of a cardiologist, pulmonologist, rheumatologist and thoracic surgeon. All the operations were performed by the same surgical team.

Results We identified 22 patients (5 male, 17 female) with APS and SLE. Mean age was 35 (range=7 to 57). Median NYHA score was III (II to IV). Mean pulmonary artery pressure (mPAP) of the patients fell immediately from 77.4±30.8 mmHg to 28.8±8.9 mmHg right after surgery, and 31.2±7.5 mmHg on discharge. One (5.9%) patient developed acute respiratory distress syndrome and died on postoperative day 10. Mean follow-up duration was 31 months, with no additional mortality.

Conclusions Patients with SLE and/or APS should be screened for CTEPH, since they are more susceptible to intravascular thrombosis. PEA is the treatment of choice for CTEPH patients, with its low morbidity and high success rates.
systemic lupus erythematosus (SLE) largely depends on migration of pulmonary artery smooth muscle cells (PASMCs). In this study, we tested whether IgG from SLE with PAH have stimulatory effects on PASMC migration.

Methods Sera from 6 SLE patients, including 1 with PAH, and 7 healthy subjects were collected, and IgG was purified using protein A or protein G. PASMC migration was examined by a Boyden chamber method. Lamellipodia formation and antibody binding sites in the cells were examined by immunocytochemistry. Identification of anti-enolase1 antibodies was performed by immunoprecipitation, western blotting, mass spectrometry, and ELISA.

Results IgG from SLE with PAH significantly increased migration of PASMCs than those without PAH in a concentration dependent manner (p<0.001). After incubation with IgG, the number of cells with lamellipodia, which represents rearrangement of the cytoskeleton necessary to migration, was 1.4-fold higher in SLE with PAH than those without PAH (p<0.01). In immunocytochemistry, IgG from SLE with PAH were colocalized with b-tubulin in the cytoplasm of PASMCs, and western blotting showed that the antibodies bound to a~50 kD protein in the lysates, which was subsequently identified as enolase1 reported to be involved in cell migration. Furthermore, the titer of IgG anti-enolase1 antibodies was 1.5-fold higher in SLE patients with PAH than those without PAH.

Conclusions IgG from a patient with SLE accompanied by PAH promoted a migration of PASMCs, which is possibly ascribed to autoantibodies to enolase1.

Abstracts

A CHALLENGE IN THE MANAGEMENT OF LUPUS NEPHRITIS WITH ACUTE KIDNEY INJURY, HEART FAILURE ON HEMODIALYSIS AND ORAL WARFARIN THERAPY: A CASE REPORT

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Background and aims Systemic lupus represents a major autoimmune disorder that leads to different major injuries to different organs of the body. Lupus nephritis can present with different disorders like nephrotic syndrome, acute kidney injury and rapidly progressive glomerulonephritis. Wise and tailored management of these cases is a must for nephrologists in order to gain the complete remission with the least side effects. If lupus nephritis is associated with other organs problems like heart failure, prosthetic valves and oral warfarin therapy, it needs more wise management. We clarify the tailored management of lupus nephritis induced nephrotic syndrome and acute kidney injury meanwhile the patient on oral warfarin therapy for prosthetic valve replacement and subsequent heart failure.

Methods We report a case of heart failure with mitral and aortic valves replacement on oral warfarin therapy. She had nephrotic syndrome, AKI due to lupus nephritis. The patient received high dose of oral steroid and maintained on hemodialysis for 2 months with full recovery of the AKI and partial recovery of the nephrotic syndrome.

Results The patient received oral high dose steroid only. Partial remission of the nephrotic syndrome occurred with full recovery of the acute kidney injury and she was maintained on once per week ultrafiltration session with improvement of the ejection fraction of the heart.

Conclusions Lupus nephritis can present with complex situations. Individualization and tailoring the management for every patient in order to gain complete remission represents a challenge for nephrologists.

COMORBIDITIES IN PATIENTS WITH SYSTEMIC LUPUS ERYTHEMATOSUS PRIOR TO AND FOLLOWING DIAGNOSIS: CASE-CONTROL STUDY

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Background and aims Systemic lupus erythematosus (SLE) may vary with several categories of comorbidities. We conducted this population-based study to examine the risk of a comprehensive range of comorbidities in patients with SLE compared with matched controls.