VALVULAR HEART DEFECTS IN MAJOR AUTOIMMUNE DISEASES *Faysal Ahmed, Oleksii Honchar*

Valvular involvement is the most encountered form of heart disease in ***systemic lupus erythematosus*** (SLE). Immunoglobulin and complement deposition in the valvular structure will subsequently lead to Libman-Sacks vegetations, valve thickening, and valve regurgitation. Valvular stenosis is rarely seen. Involvement of the mitral valve is most frequently encountered. Valve disease for most patients is mild and asymptomatic, but patients in whom severe mitral regurgitation develops will present with symptoms of congestive heart failure. A heart murmur will be heard in almost all patients with moderate or severe regurgitation. Transesophageal echocardiography is the most sensitive method to detect the valvular involvement. The valvular changes, the hemodynamic status, or the symptomatology have been shown to progress, remain stable, or sometimes improve. Severe regurgitation, infective endocarditis, and thromboembolic events (mostly stroke or transitory ischemic attacks) are complications of valvular involvement in SLE. In treatment of these patients, prophylaxis of infectious endocarditis, selective antiaggregant and anticoagulant medication, and valve replacement are currently offered. The role of corticosteroid treatment is still unclear in the outcome of SLE valvulopathy.

Heart valve disease (HVD) is the most frequent cardiac manifestation in patients with ***antiphospholipid syndrome*** (APS), with prevalence of 30%. The definition is based on the presence of thickening or vegetation of the valves (mainly mitral and aortic) as described by Libman and Sacks for patients with systemic lupus erythematosus (SLE). Transthoracic and/or transoesophageal echocardiography (TTE and TEE, respectively) enable early and accurate diagnosis and help avoid misdiagnosis as rheumatic valve disease. The presence of antiphospholipid antibodies (aPL) in SLE patients is associated with a threefold greater risk of HVD, confirming the crucial importance of these antibodies in the pathogenic process, leading to thrombotic manifestations on valves because of hypercoagulability. Natural history is characterized by worsening of HVD over time with an increased risk for stroke. APS patients undergoing valve-replacement surgery are at high risk of thrombotic and bleeding complications. Thus aPL-associated HVD has affects clinical management of APS patients.

***Rheumatic heart disease*** is the most serious sequelae of rheumatic fever occurring in approximately 30% of rheumatic fever patients. Patients with acute rheumatic fever may develop varying degrees of pancarditis with associated valve disease, heart failure, and pericarditis. Worldwide, rheumatic heart disease remains a major health problem although its prevalence in the developed countries is much reduced. Involvement of the mitral valve results in mitral regurgitation and/or stenosis. Where surgery is indicated, mitral valve replacement is usually necessary although in some cases, mitral valve repair is possible.