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THREAT FOR PANDEMIC EMERGENCE OF NEGLECTED CARDIOVASCULAR DISEASE

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Forgotten diseases of poverty and tropical infections as classified by Center for Disease Control (CDC) affect millions of people in United States alone. As an example, Chagas' disease is a vector and food-borne as well as sexually transmissible disease which threatens a global epidemic if not eradicated soon. Over 300,000 patients are diagnosed in USA, and six-eight million patients suffer from Chagas' disease in Latin America. Centre for Tropical and Infectious Diseases in Negrar (Verona), in Florence, Italy reported that 4.2% of patients are serologic positive for Chagas' disease. It is estimated that 4.2% of Latin-Americans in Europe to be affected by Chagas' disease and a major portion resides in Italy. Contaminated fruit juice and surge of immigrants, blood and organ transplants are responsible for the global spread of the disease. In acute stage patients develop fever, cardiovascular complications and myocarditis. In addition, 30-40% patients progress to chronic cardiomyopathy after 10-20 years, as latent organisms in pseudocysts rupture free to attack and damage neurons and ganglia. The organisms harbor sophisticated molecular and signaling structures; yet actively alter the host cardiomyocytes' specific G proteins and Ca channels signaling pathways and modulate prostaglandins and cytokines to render them ineffective and to support invasion. MicroPET and MRI studies in models demonstrate cardiac altered structure and dysfunction during acute myocarditis as well as chronic cardiomyopathy. In this presentation, pathogenesis and epidemiology of opportunistic and infectious diseases will be scrutinized with emphasis on cardiovascular complications and possible epidemic and pandemic outbreak.

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