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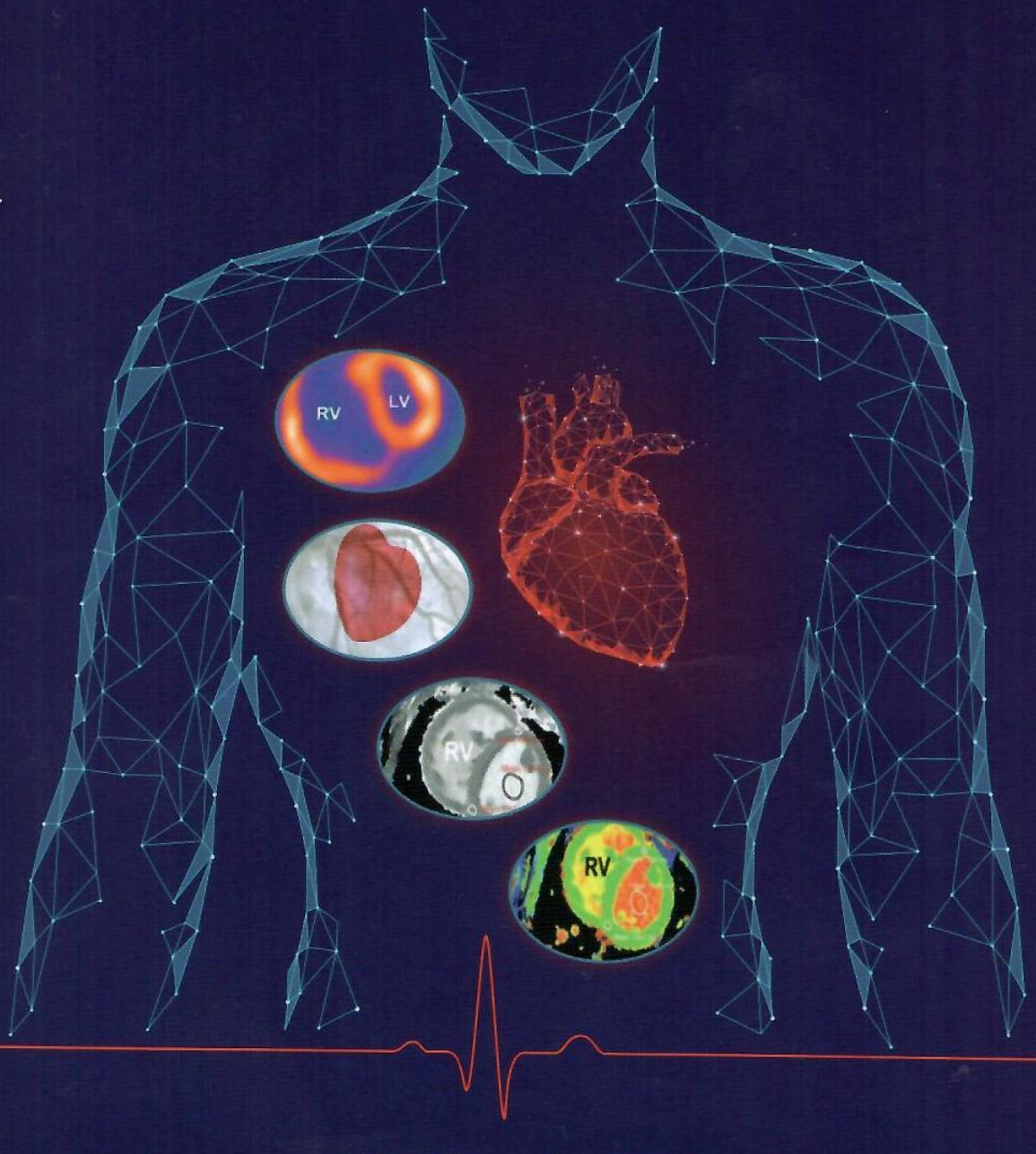
"HIGHLIGHTS IN CARDIOVASCULAR DISEASES"

ABSTRACT BOOK



04-06 November 2022,
h. DoubleTree by Hilton, Skopje, North Macedonia

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A CASE OF MYOCARDIAL INFARCTION IN A YOUNG PATIENT WITH A COMBINATION OF FACTOR V LEIDEN AND MTHFR GENE MUTATION

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Introduction: Inherited thrombophilia due to a combination of factor V Leiden and MTHFR gene mutation leads to a hypercoagulable state resulting in thromboembolic events and arterial thrombosis.

Case report: We present a case of a 35-year-old male patient who presented to the emergency room with intensive chest pain that started 2 hours ago while he was cycling for a distance of 11km. The ECG showed ST segment elevation of 3mm in the inferior leads. An emergent coronary angiography was indicated which showed thrombotic formations in the proximal right coronary artery (RCA), rPDA and RPL without atherosclerotic plaques. Percutaneous coronary intervention with plain old balloon angioplasty (PCI/ POBA) and thromboaspiration was performed, which was followed by tirofiban infusion and continuous infusion of unfractionated heparin for 24 hours. The molecular genetic analysis revealed the patient to be heterozygous for factor V Leiden and homozygous for methylenetetrahydrofolate reductase (MTHFR) C677T gene mutation. After completing the required clinical examinations, the patient was discharged in a good clinical condition with a recommendation for medical treatment including a prophylactic dose of direct oral anticoagulant. After a one-year follow-up, the patient had no symptoms or recurrent cardiovascular events.

Conclusion: Inherited thrombophilia is a significant risk factor for coronary artery disease and performing genetic testing in younger patients with a cardiovascular event, plays an important role for adequate treatment and prophylaxis from recurrent complications. Although individual patient consideration is recommended, the use of oral anticoagulation for prophylaxis is shown to be effective in these patients. However, further studies are needed for the indications and duration of prophylactic anticoagulation in patients with inherited thrombophilia after an arterial thrombotic event.

Key words: Factor V Leiden mutation, MTHFR gene mutation, myocardial infarction