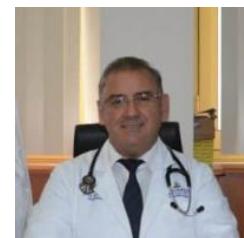


EARLY RECOGNITION OF HEART REMODELING USING IMAGING BIOMARKERS

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Abstract:

Heart failure (HF) is a progressive process and gradually remodels heart tissue. In this course, we previously documented "predominant myocardial LV base and diminished regional LV basal cavity volume in LVH using real-time three-dimensional imaging and predominant septal wall with blunted systolic regional function in myocardial performance analysis compared to free wall documenting that the importance of regional morphologic as well as functional features in the remodeling process of heart failure. We also used exercise in hypertensive individuals as the external stressor using combined tissue analysis and exercise stress test to evaluate their adaptation and determine blood pressure and heart rate increase under stress for rate-pressure product representing hyper-functional myocardial energetics in the early-stage disease.

To test and validate our clinical findings, we have planned microimaging studies. Therefore, we have detected "focal hypertrophy of LV septal base (basal septal hypertrophy, BSH) is the early imaging biomarker of pressure-overload stress leading to heart failure." Very recently, we have validated BSH with HYPERFUNCTION by a small animal study using a 3 rd generation microscopic ultrasound. 1,2 As the conclusion, early imaging biomarker, "BSH may support early diagnosis of remodeling and effective medical therapy in a timely fashion."



Biography:

Prof. Fatih Yalcin is at present from the Department of Cardiology at Mustafa Kemal University, Antioch, Turkey. He is a Fulbright Visiting professor at Johns Hopkins University since 2009. He completed his M.D. at the University of Akdeniz (Mediterranean), Antalya, Turkey in 1989. He was Resident in Min. of Health, Ankara Emergency Hospital, Ankara, Turkey from 1990 to 1995. He was a Fellow at Leeds University Hospitals, Leeds, UK, Cleveland Clinic Foundation, Cleveland, OH, USA. He also worked at Baskent University, Adana, Turkey. He has many

publications in peer-reviewed international journals. Research Interest Novel Cardiovascular Imaging, Tissue Doppler Imaging, Live 3 DE, third Generation Microscopic USG, and heart MRI. Publication Board Memberships: World Journal of Cardiovascular Surgery, Datasets International-Radiology Journal, and Austin Journal of Clinical Cardiology.

Speaker Publications:

1. Exercise hypertension should be the recalled in a basal septal hypertrophy as the early imaging biomarker in a patients with stressed heart morphology", Blood Pressure Monitoring 25(2):118-119, April 2020, DOI: 10.1097/MBP.0000000000000429
2. Intracavitory gradients in mice with early regional remodeling at the compensatory hyperactive stage prior to lv tissue dysfunction", Journal of the American College of Cardiology 75(11):1585, March 2020, DOI: 10.1016/S0735-1097(20)32212-9
3. Decreased Heart Rate Variability in Sickle Cell Anemia as Effect of Pulmonary Arterial Hypertension", April 2019, Kardiologiiia 59(4):39-44 DOI: 10.18087/cardio.2019.4.10237

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