RESEARCH TOPIC CLI8
Malignant Mitral vAlve prolapse and disjunction by cardiac maGnetIC resonance [MAGIC]

Research Area
Medical Area

Clinical Unit name
Department of Cardiovascular Medicine

Supervisor
Gianluigi Condorelli gianluigi.condorelli@hunimed.eu
Marco Francone marco.francone@hunimed.eu

Abstract
Mitral valve prolapse (MVP) and mitral annulus disjunction (MAD) are highly prevalent in the general population and are generally considered benign. However, a subgroup of patients with MVP/MAD is exposed to sudden cardiac death (SCD). This devastating complication strikes with up to 408 cases per 100,000 person-years with no established criteria guiding selection for implantable-cardioverter-defibrillator in daily practice. Novel imaging findings by cardiac magnetic resonance, including late gadolinium enhancement (LGE) and T1-mapping alterations underpinning myocardial fibrosis, have been recently associated with an increased risk of arrhythmic complications. This project will focus on integrating demographic, clinical, echocardiographic, and cardiac magnetic resonance data for validating robust parameters predicting malignant ventricular arrhythmias in patients with MVP/MAD, improving risk stratification, and patients' selection for implantable cardioverter defibrillator. The candidate will be responsible for generating a clinical database for the study. Additionally, she/he will be part of the team responsible for collecting clinical and imaging data and conducting follow-up assessments. The candidate must have completed at least the third year of specialty training in cardiology.

Scientific references
Han HC, Ha FJ, Teh AW, Calafiore P, Jones EF, Johns J, Koshy AN, O'Donnell D, Hare DL, Farouque O, Lim HS. Mitral Valve Prolapse and Sudden Cardiac Death: A Systematic Review. J Am Heart Assoc. 2018 Dec 4;7(23):e010584. doi: 10.1161/JAHA.118.010584.

Figliozzi S, Georgiopoulos G, Lopes PM, et al. Myocardial Fibrosis at Cardiac MRI Helps Predict Adverse Clinical Outcome in Patients with Mitral Valve Prolapse. Radiology. 2023;306:112-121. doi: 10.1148/radiol.220454.

Figliozzi S, Georgiopoulos G, Masci PG. Letter by Figliozzi et al Regarding Article, "The MIDA-Q Mortality Risk Score: A Quantitative Prognostic Tool for the Mitral Valve Prolapse

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Sriram, C.S.; Syed, F.F.; Ferguson, et al. Malignant Bileaflet Mitral Valve Prolapse Syndrome in Patients With Otherwise Idiopathic Out-of-Hospital Cardiac Arrest. J. Am. Coll. Cardiol. 2013, 62, 222–230.

Basso C, Perazzolo Marra M, Rizzo S et al Arrhythmic Mitral Valve Prolapse and Sudden Cardiac Death. Circulation. 2015;132(7):556-66. doi: 10.1161/CIRCULATIONAHA.115.016291

Type of contract

Position reserved for employees of IRCCS Humanitas Rozzano (PhD Executive).

Posizione riservata a dipendente di IRCCS Humanitas Rozzano (PhD Executive).

Humanitas University
Via Rita Levi Montalcini, 4
20072 Pieve Emanuele (MI) Italy
Tel +39 0282241 - Fax +39 0282242394
info@hunimed.eu
hunimed.eu
CF 97692990159