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Press release

Calculating the risk of cardiovascular death in subjects suffering from heart failure

It is called the MECKI score, an instrument based on six values that establish the severity of the patient

This is one of the main topics of the International Symposium
“Chronic heart failure in 2016: prognosis”

Milan, 25 February 2016 - Heart failure is a significant risk factor for cardiovascular death. But how can we evaluate this risk in the individual patient? The Centro Cardiologico Monzino has come up with the answer by creating the MECKI score (Metabolic Exercise, Cardiac, Kidney Index), an instrument for estimating the risk of heart failure, based on data obtained from the cardiopulmonary test and integrated with echocardiographic and laboratory parameters. All it requires is the entering of the data of six values which together established the patient's severity in the most objective manner possible: haemoglobin, sodium, kidney function, left ventricle ejection fraction (the portion of blood that the heart pumps from the left ventricle with every heart beat), oxygen consumption peak and ventilatory efficiency during exercise. Thanks to the MECKI score it is possible to establish the likelihood of cardiovascular death or the need of an urgent heart transplant within two years in subjects with systolic heart failure. This will be one of the principle topics of the International Symposium “Chronic heart failure in 2016: prognosis” to be held in Milan from 25 to 27 February. The Symposium, which is organised by the Centro Cardiologico Monzino of Milan and by the Department of Clinical Science of the University of Milan, is promoted by the Fondazione Internazionale Menarini.

“The MECKI score is the most recent prognostic score of heart failure”, explains Pier-Giuseppe Agostoni, Head of the Critical Cardiology Department of the Centro Cardiologico Monzino. “The score has been validated by a study during which we considered various demographic, clinical, echocardiographic and laboratory parameters, as well as the cardiopulmonary exercise test in a population of 2716 patients suffering from chronic heart failure caused by systolic dysfunction coming from thirteen Italian centres and in whom we identified those who maintained an independent predictive value with the multivariate analysis. In this way 6 parameters were identified that have a strong independent predictive value and which were entered in the calculation of the score by taking account of their specific weight in determining the prognosis. The MECKI score is a prognostic assessment

model strongly based on cardiopulmonary exercise test parameters that considers both the peak VO₂ (the maximum volume of oxygen consumed per minute) and the ventilator efficiency, and it is currently the score that offers the greatest reliability on the predictive scene like the ROC (Receiver operating characteristic) among the scores currently available for giving a long-term prognostic assessment of heart failure due to depressed systolic pressure. The MECKI score has been affirmed among specialists and today there are twenty-six Italian centres that collaborate with more six thousand patients in follow-up. In addition, a European evaluation is in progress for the recognition of the MECKI score under the aegis of the European Cardiology Society».

The calculation based on the MECKI score is easy and intuitive thanks to an online calculator that can be accessed on the link: <https://www.cardiologicomonzino.it/Clinica/Cardiologia/Pages/MeckiScore.aspx>. There is also a version for iPads that can be downloaded free of charge from iTunes: <https://itunes.apple.com/US/app/id989780509?mt=8>.

Cardiologists of the Centro Cardiologico Monzino point out that the Mecki Score is a calculation instrument reserved exclusively as a clinical backup for physicians. "In order not to generate alarmism, we recommend that patients who want to use it always conduct the online test together with a physician, either their own general practitioner or cardiologist, who will be able to correctly interpret the results and relative effect on their therapy. In any case it is unlikely that patients would have access to the required values and therefore the test should always be conducted in the presence of a specialist" concludes Agostoni.

The Centro Cardiologico Monzino is on hand to collaborate with physicians in analysing the results of the Mecki Score and they can contact the Heart Failure Operating Unit either by calling 02.58002299/2772 or writing to fpcr@cardiologicomonzino.it.

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