CorSalud 2017 Jul-Sep;9(3):218-221

CorSalud

Cuban Society of Cardiology

Letters to the Editor

Cardiocentro ERNESTO CHE GUEVARA SANTA CLARA CUBA

Risk stratification in sudden death due to hypertrophic cardiomyopathy

Estratificación del riesgo en la muerte súbita por miocardiopatía hipertrófica

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Received: April 18, 2017
Accepted: May 18, 2017

Key words: Sudden death, Hypertrophic cardiomyopathy, Risk stratification
Palabras clave: Muerte súbita, Miocardiopatía hipertrófica, Estratificación de riesgo

To the Editor:

In the last two years, important works on hypertrophic cardiomyopathy (HCM) have been published. From the clinical point of view, perhaps, the most important has been the publication of the Diagnosis and Treatment Guidelines of the ESC (European Society of Cardiology)[1]. In this document, one of the novelest aspects has been the presentation of a new risk index of sudden death.

The classic risk stratification based its recommendation for the implementation of an implantable cardioverter-defibrillator (ICD) in the presence of one or two risk factors of sudden death, from a list of clinical markers including: presence of severe hypertrophy (> 30 mm), severe obstruction (> 90 mmHg), non-sustained ventricular tachycardia (NSVT), history of unexplained syncope, family history of sudden death at young age, or abnormally flat blood pressure response in the stress test. The American guidelines consider, even today, that the high-risk patient is one who has at least one of the aspects of the list, while in the previous European guidelines it was considered that the presence of two of these was enough to implement an ICD.

The prevalence of each of the risk factors is relatively high (> 10%); on the other hand, the positive predictive value of sudden death at five years individually is low (< 10%). It is also known that the value of risk predictors is modulated by other factors, mainly by age. Therefore, the NSVT is very uncommon in patients under 30 years of age, but when it is present, the risk of sudden death is more than double that of older patients.

The ESC, in its document, echoed the results of the largest collaborative study published to date, which included more than 3.600 patients with this disease[2]. In this paper, and after a complex statistical study, a formula was presented for the calculation of the risk of sudden death estimated at five years that includes: age, the presence of NSVT, the value of the maximum thickness of the left ventricular wall, the maximum gradient, the presence of unexplained syncope, the family history of sudden death and the diameter of the left atrium.

Through this formula, it is possible to identify most of the patients who will have a sudden death and recommending them the implantation an ICD. But if there was established a cut risk of this disease to five years at 4% for the recommendation of this device, it would be necessary to establish an ICD to 31% of the patients with HCM, to prevent 71% of deaths. The efficiency of this strategy is clearly superior to that of the old European guidelines, which recommended two risk factors, or the current American guidelines, in which only a risk factor is enough. In those European guidelines there would have been implemented only 13% of ICD, which would prevent 38% of the deaths; whereas with the American, it would be necessary to implant an ICD almost in half of the patients (48%), to prevent 74% of sudden deaths. It is important to remember that the implantation of a device is not free of complications, sometimes serious, and that the selection of candi-

Lecture presented to the II National Symposium on Sudden Cardiac Death and I Ibero-American Convention on Sudden Cardiac Death (December 6-9, 2016. Havana, Cuba).

dates must be accomplished in a sensible and individualized way.

The incorporation of this index, validated by other European[3] and South American[4] groups, and discussed by North Americans[5] has been an undoubted clinical advance. Nevertheless, it is important to remember that there are several variables involved in the prognosis that were not incorporated in the formula, such as the presence of fibrosis in the magnetic resonance, or genetics.

CONFLICT OF INTERESTS

None

REFERENCES

1. Elliott PM, Anastasakis A, Borger MA, Borggrefe M, Cecchi F, Charron P, *et al*. 2014 ESC Guidelines on diagnosis and management of hypertrophic cardiomyopathy: the Task Force for the Diagnosis and Management of Hypertrophic Cardiomyopathy of the European Society of Cardiology (ESC). Eur Heart J. 2014;35(39):2733-79.
2. O'Mahony C, Jichi F, Pavlou M, Monserrat L, Anastasakis A, Rapezzi C, *et al*. A novel clinical risk prediction model for sudden cardiac death in Hypertrophic Cardiomyopathy (HCM risk-SCD). Eur Heart J. 2014;35(30):2010-20.
3. Vriesendorp PA, Schinkel AF, Liebregts M, Theuns DA, van Cleemput J, Ten Cate FJ, *et al*. Validation of the 2014 European Society of Cardiology guidelines risk prediction model for the primary prevention of sudden cardiac death in hypertrophic cardiomyopathy. Circ Arrhythm Electrophysiol. 2015;8(4):829-35.
4. Fernández A, Quiroga A, Ochoa JP, Mysuta M, Casabé JH, Biagetti M, *et al*. Validation of the 2014 European Society of Cardiology Sudden Cardiac Death Risk Prediction Model in hypertrophic cardiomyopathy in a reference center in South America. Am J Cardiol. 2016;118(1):121-6.
5. Maron BJ, Casey SA, Chan RH, Garberich RF, Rowin EJ, Maron MS, *et al*. Independent assessment of the European Society of Cardiology Sudden Death Risk Model for Hypertrophic Cardiomyopathy. Am J Cardiol. 2015;116(5):757-64.

The airway in cardiopulmonary and cerebral resuscitation

La vía respiratoria en la reanimación cardiopulmonar y cerebral

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Received: April 18, 2017
Accepted: May 18, 2017

Key words: Airway management, Orotracheal intubation, Cardiopulmonary resuscitation
Palabras clave: Manejo de la vía aérea, Intubación orotraqueal, Reanimación cardiopulmonar

To the Editor:

To have access to the airway is of vital importance during a cardiac arrest. In the out-of-hospital and in-hospital settings, before a difficult airway, the ventilation and oxygenation must be ensured as soon as possible, but tracheal intubation requires training and regular practice; thus, untrained personnel should not waste time trying to do it and should focus on high-quality chest compressions and ventilation bag and mask, until the arrival of expert resuscitators[1-5].

The publication of the study by Soar and Nolan[1] on airway in cardiopulmonary resuscitation, where there is included an extensive database of cases of out-of-hospital cardiac arrest, and which offers an opportunity to reflect on an issue, in which probably, it is very difficult to set clear and uniform rec-

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