

First use of Ranolazine in adolescent patients affected by hypertrophic cardiomyopathy with refractory symptoms.

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Background: The management of patients with hypertrophic cardiomyopathy (HCM) and refractory symptoms to conventional therapy represents a big challenge for clinical cardiologists. For these patients novel therapeutic approaches are required. However, there is a lack of data in pediatric population and specific trial for evidence of drugs efficacy are still missing. The aim of this study was to report the use of ranolazine in pediatric patients with HCM refractory to standard treatment.

Methods: We collected data of our patients treated with ranolazine before and after the therapy. Data included ECG intervals, NYHA functional class and maximum oxygen uptake (VO₂ max) during exercise.

Results: We report 6 cases of adolescent patients (3 males; age range 13-17 years), affected by HCM with refractory symptoms that did not respond to classic therapy. Four patients had restrictive physiology, 3 patients show ventricular dysfunction, 1 patient had obstruction and in 4 out of 5 patients ICD was implanted. All patients were in advanced functional class (NYHA II-IV), and in maximal medical therapy with betablockers and furosemide. The subsequent introduction of ranolazine, based on the experience reported in adults, led to improvement of symptoms, with a reduction in NYHA functional class and an increase in VO₂ max at exercise test. No significant changes on ECG were noted.

Conclusion: Introduction of ranolazine in adolescent patients with HCM with refractory symptoms, led to an excellent result with an improvement of NYHA functional class and VO₂ max.