Effect of a 48-Hour Discontinuation of Beta Blockers Before Dobutamine Atrovent Stress Echocardiography on the Occurrence of Sustained Arrhythmic Events During the Test
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Background: Beta blockers (BB) are often discontinued before dobutamine atrovent stress echocardiography (DASE) in order to avoid blunting the ischemic response. However, the effect of their discontinuation on the occurrence of sustained arrhythmic events during DASE remains unclear.

Objective: To determine the effect of discontinuation of BB 48 hours before DASE on the occurrence of sustained arrhythmic events; duration ≥ 20s for supraven tricular arrhythmias (SVA) and 10 complexes for ventricular arrhythmias (VA) and to analyze the consequences of this strategy to reach the target heart rate.

Methods: We studied 44 patients with angina pectoris (38 men, mean age 61) suspected of coronary artery disease. BB was discontinued 48 hours before DASE and Dob-echo was performed. Dobutamine was increased in a stepwise manner up to 6 mcg/kg/min. Dob-echo was determined at all stages.

Results: No side effect was observed during the wash out period in Gp2. A difference was observed between the two Gps regarding to age (62 ± 10 vs 61 ± 10, p=0.001) and sex (7/17 vs 6/17, p=0.001). Concerning the occurrence of arrhythmic events, no difference was observed between the two Gps; 22 Pts (6%) in Gp1 vs 7 Pts (5%) in Gp2 such for both of SVA: 18 Pts (5%) in Gp1 vs 5 Pts (8%) in Gp2 and VA v 4 Pts (1%) in Gp1 vs 2 Pts (1%) in Gp2. In addition, the difference was not statistically significant between the two Gps regarding to heart rate (beats/min) at baseline and at a maximal dose of dobutamine atrovent 75 ± 14 vs 77 ± 15 and 146 ± 23 vs 140 ± 18 respectively. Finally, no difference was observed in reaching the target heart rate; 206 ± 87 (8%) in Gp1 vs 119 ± 81 (81%) in Gp2 but dose of atrovent was higher in Gp2: 0.65 ± 0.22 mg vs 0.49 ± 0.24 mg, p=0.009.

Conclusions: Progressive discontinuation of BB, 48 hours before DASE is safe and does not induce arrhythmic events during the test. Moreover, stopping BB 48 hours before DASE, seems to be enough to reach the target heart rate provided an increase in the dose of atrovent.