ALISKIREN REDUCES QT DISPERSION IN HYPERTENSIVE DIABETIC PATIENTS

Background: to compare the effect of aliskiren and amlodipine on QT dispersion in hypertensive diabetic patients.

Methods: after a two week placebo period 86 mild hypertensive patients with well controlled type 2 diabetes (HbA1c < 7%) were randomized to aliskiren 300 mg or amlodipine 10 mg for 24 weeks; hydrochlorothiazide 12.5 mg was added after 12 weeks if BP remained uncontrolled. At the end of the placebo period and of the treatment period BP was evaluated and an ECG was recorded using a paper speed of 50 mm/s. The QT intervals were measured manually in all the 12 leads in blinded fashion and 3 consecutive QT intervals were measured and averaged for each lead. The QT dispersion was corrected for the heart rate (QTc).

Results: the two treatments induced a significant (p<0.001 vs baseline) and similar BP reduction both for SBP and DBP, with no difference between treatments; also the number patients who achieved a BP normalization was similar (82% with aliskiren vs 86% with amlodipine, p=0.42). Aliskiren induced a significant reduction in QTc dispersion (-10.5 ± 23.6 ms, p=0.03) and in QTmax (-11.9 ± 22.7 ms, p=0.02); the QTc dispersion change did not correlate with the change in BP. Amlodipine induced a smaller and non significant reduction in QTc (-8.4 ± 27.7 ms, p=0.07) and in QTmax (-7.1 ± 30.2 ms, p=0.08) and the QTc dispersion change showed a significant correlation with SBP change (r=0.459, p<0.01).

Conclusions: aliskiren chronic treatment reduces QT dispersion in hypertensive diabetic patients and this effect is not related to the lowering of BP alone. This suggests that aliskiren has the potential to reduce severe arrhythmic complications in this type of patients.