Time-dependent effects of doxorubicin on LVP and ECG parameters in guinea-pig Langendorff perfused isolated hearts

**INTRODUCTION:**

We have previously shown that doxorubicin, a widely used anticancer drug with reported clinical QT prolongation, also increases QT interval in guinea-pig Langendorff perfused isolated heart.

**METHODS:**

Doxorubicin 30 µM has been shown to accumulate in the myocardium. However, the perfusion time was short and effects only analyzed at the end of the perfusion period. Moreover, doxorubicin has been shown to accumulate in the myocardium.

**RESULTS:**

Doxorubicin 30 µM progressively decreased heart rate from 10 to 90 min (from -7.9% to -30.4%). From 10 to 90 min, doxorubicin 30 µM also progressively increased PR interval (from +3.4% to +32.4%), QT interval (from +3.4% to +32.4%), QTc interval (from +0.6% to +17.1%), and Tpeak - Tend interval (from +6.6% to +23.8%).

**CONCLUSION:**

Doxorubicin 30 µM progressively decreased heart rate from 10 to 90 min (from -7.9% to -30.4%). From 10 to 90 min, doxorubicin 30 µM also progressively increased PR interval (from +3.4% to +32.4%), QT interval (from +3.4% to +32.4%), QTc interval (from +0.6% to +17.1%), and Tpeak - Tend interval (from +6.6% to +23.8%).