Investigation of the antifibrillatory drug interactions between valsartan and amiodarone in perfused rabbit hearts

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The alarming reports of the proarrhythmic effects of several antiarrhythmic agents (1) have stimulated our interest to study the antifibrillatory interactions that may occur when antiarrhythmic and antihypertensive drugs from different classes are combined. We used the serial-shock technique of measuring ventricular fibrillation threshold (VFT), a method that proved to be reliable in assessing the antifibrillatory potency of many antiarrhythmic drugs (2-3). Previously, we have presented the antifibrillatory interactions between valsartan and lidocaine (4) and that between valsartan and propranolol (5). In this abstract we report the antifibrillatory interactions between valsartan and amiodarone. Studies were carried out on hearts isolated from New Zealand white rabbits of either sex weighing 1.5 to 2 Kg. The method used has been described in details previously (2). Perfusion with amiodarone produced significant, dose-dependent increase in VFT while perfusion with valsartan did not cause any significant change. In addition, there was no significant difference in the increase in VFT produced by the combined infusion 1 µmol of valsartan and 1 µmol of amiodarone and the summation of the increases produced by the separate infusion of these two concentrations. This is in contrast to a significant synergistic antifibrillatory effect of the combined infusion of lidocaine and propranolol that was reported previously (6). This suggests that valsartan does not have antifibrillatory interactions with amiodarone, which may be taken as indicative of its safety in combining with class 3 antiarrhythmic agents, such as amiodarone.


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