ROTIGAPTIDE REMODELS CONNEXIN 43 EXPRESSION IN A PROLONGED VENTRICULAR-FIBRILLATION IN SWINE

Li Jingsha, Zhong Jingquan, Zeng Qixian, Liu Hongzhen
Qilu Hospital of Shandong University, Ji’nan, Shandong Province, China

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Objective In the present study the effect of ZP123 on different-duration VF was evaluated by analysing VF mean frequency (VFmf) and amplitude (VFma).

Methods Twenty pigs randomly received either ZP123 (drug group: 10 μg/kg/h; n=10) or saline infusion (control group: 50 ml/h, n=10) over 15 min before VF electrically induced. VFmf and VFma obtained from electrocardiography were analysed by a multipurpose polygraph. Haemodynamics, the rate of the first three successful defibrillation and return of spontaneous circulation (ROSC) were recorded.

Results In drug versus control animals, VFmf during the whole 8-minute VF was 11.8±2.1 Hz vs 10.4±2.0 Hz (p<0.05), VFma was 0.24±0.10 V vs 0.31±0.16 V (p<0.05) and hemodynamic during VF in the two groups were comparable (p>0.05). There was no difference in the rate of successful defibrillation and ROSC between the two groups (p>0.05). However, in the first 4 min, VFmf of the drug group was higher (p<0.05) and VFma was roughly equal to that of control group (p >0.05). Hemodynamic of the first 4 min in the drug group was higher (p<0.05).

Conclusion While ZP123 could not improve the rate of successful defibrillation and ROSC in prolonged VF, it may still play a positive role in short-duration VF no more than 4 min.