Conclusions We also observed that expression of c-Myc can be increased by I/R injury was significantly compared with two groups. But mean operation time of group B (28.4±9.4 min) was shorter than that of group A (105.8±27.6 min), furthermore, compared with two groups, there was statistic significant.

Conclusions The method of establishment closed chest porcine model of AMI by implantation balloon embolism in target vessel is feasible, safe, quick and relatively effective.

de0178 DIFFERENTIAL EXPRESSION OF N-MYC DOWNSTREAM REGULATED GENE 2 (NDRG2) IN THE RAT HEART AFTER ISCHAEMIA/REPERFUSION INJURY

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Aims It has been shown that Ndrg2 (N-Myc downstream-regulated gene 2), a Myc-repressed gene, is markedly expressed in heart. Ndrg2 can act as a stress responder under hypoxia and is necessary for hypoxia-induced apoptosis in certain tumour cell lines. In the present study, we investigated whether ischaemia/reperfusion (I/R) injury played a role in the regulation of Ndrg2 expression in rat heart and further explored the possible relationship between Ndrg2 expression and cardiomyocyte apoptosis induced by I/R injury.

Methods Rats were subjected to open chest surgery coronary artery ligation for ischaemia only or followed by reperfusion. Immunostaining and Western blot were applied to test the expression of Ndrg2, c-Myc, cleaved-caspase3 from myocardium, and TUNEL (terminal dUTP nick end labelling)-staining for apoptosis determination of myocardium.

Results The immunostaining confirmed Ndrg2 distribution in cardiomyocytes. The Ndrg2 expression in myocardial tissue after I/R injury was significantly reduced at both mRNA and protein levels. We also observed that expression of c-Myc can be increased by I/R injury and was significantly inversely correlated with Ndrg2 expression. Furthermore, the rapid apoptotic rate at the early phase of reperfusion was ameliorated in the late phase. Some results in vivo were further confirmed by ex vivo study in cultured cardiomyocytes subjected to simulated I/R.

Conclusions Our data suggests that up-regulation of pro-apoptotic c-Myc expression induced by I/R injury in rat myocardium may contribute to the down-regulation of also pro-apoptotic Ndrg2. Such stress response may be involved in the post I/R anti-apoptosis mechanism and myocardial repair in rat.

de0179 IN ORDER TO INVESTIGATE THE POTENTIAL MECHANISM OF PIPERINE, WHICH IS THE ACTIVE SUBSTANCE FROM RHODOBRYUM ROSEUM LIMPR

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Objectives In order to investigate the potential mechanism of Piperine, which is the active substance from Rhodobryum roseum Limpr., on acute atrial electrical remodelling in atrial fibrillation by inducing of rapid atrial pacing, as well as its protective effect on injury of oxidative stress in myocardium.

Methods 24 healthy rabbits were collected, and randomly assigned to four groups as follows: normal saline (NS), normal saline + rapid atrial pacing (NS+RAP), piperine (PI), piperine + rapid atrial pacing (PI+RAP). In the study, acute electrical remodelling was conducted by rapid atrial pacing. In pacing group, right atrium was paced with a frequency of 500–600 bpm for 3 h, atrial effective refractory period was measured at 0 h, 0.5 h, 1 h, 1.5 h, 2 h, 2.5 h and 3 h after pacing, respectively. Then we calculated the rate adaptation of atrial effective refractory periods in different basic pacing cycle lengths.

Results 1. In the experiment, paroxysmal atrial fibrillation or atrial tachycardia can be induced only in NS+RAP group, whereas no similar phenomenon was observed in the other three groups. 2. AERP was markedly shorter in NS+RAP group but it was no changed in NS and PI+RAP group. The rate adaptation of AERP was reduced in NS+RAP, but got lowest point (−0.24±0.59)1 h after pacing, while the rate adaptation of AERP presented no significant changes in NS and PI group.

Conclusions Piperine can help reduce incidence of AF, prevent the shortening of AERP and the rate adaptation of AERP, in other words, piperine can alleviate acute electrical remodelling in acute phase of AF. Piperine can alleviate injury of oxidative stress in AF through suppression of MDA overproduction, reducing the consumption of SOD, suppression of XOD activity as well as Calcium overload, consequently develops the protective effect on myocardium during AF. 3. When AF is present, PV has the most serious injury of oxidative stress but RA suffer the slightest injury. Meanwhile, antioxidant effect of piperine is the most conspicuous in PV.

de0180 THE ACUTE PROARRHYTHMIC EFFECTS OF LOW CONCENTRATION BPA ON FEMALE ADULT RAT AND THE ELECTROPHYSIOLOGIC MECHANISMS

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Objective To investigate the acute proarrhythmic effects of low concentration BPA on adult rat and to demonstrate the electrophysiologic mechanisms.

Methods and results Acute exposure to BPA increased the contractility of cardiac myocytes from female rat heart with inverted U-shaped dose-response curve, these effects were female specific. After-contraction or after-transient rate of female rat cardiac myocytes increased in BPA group, and increased much more by exposure to the mixture of BPA and 10−9 M E2. Increasing BPA or E2 from 10−9 M to 2X 10−9 M did not increase the effects induced responses. Although BPA combined with E2 did not induce the