of spontaneous circulation in experimental group. On seventh day after CPR, neurons apoptosis was examined using terminal deoxy- nucleotidyl transferase mediated dUTP nick end labeling (TUNEL) staining and the expression of caspase-3 was detected by the immunohistochemical strepto avidin biotinperoxidase complex (SABC) method in cortex, hippocampus CA1 region and cerebellum of the rats.

**Results** 1. There were 12 and 10 rats completed the experiment in the experimental and control group respectively. Their fate between the two groups was no significant difference ($\chi^2=0.404, p=0.576$). 2. On seventh day after CPR, The serum concentrations of H$_2$S was $9.12\pm3.17$ μmol/l in the experimental group and the contrast was $3.72\pm1.05$ μmol/l, the difference between the two groups had statistic significance ($t=5.136, p=0.000$). 3. Compared with the control group, the experimental group’s neurons apoptosis index and the sum of integrated optical density (IOD) of caspase-3 in cortex, hippocampus CA1 region and cerebellum were obviously reduced ($p<0.05$).

**Conclusion** After CPR, H$_2$S can inhabit neurons apoptosis and its mechanism may be through caspase-3 pathway. It may play a role in the treatment of the brain injury after CA.

**e0005** MODEL OF CARDIAC ARREST IN RATS BY TRANSCUTANEOUS ELECTRICAL EPICARDIUM STIMULATION

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**Objective** To establish a new model of Cardiac Arrest (CA) in rats by transcutaneous electrical epicardium stimulation.

**Methods** Two acupuncture needles connected to the anode and cathode of a stimulator were transcutaneously inserted into the epicardium as electrodes. The stimulating current was steered to the cathode of a stimulator were transcutaneously inserted into the epicardium. The stimulating current was $3.72\pm3.17$ μmol/l. When the electrical stimulation stopped, 18/20 rats had ventricular fibrillation and has fewer complications.

**Results** The success rate of induction was $12/20$ at the current intensity of $1$ mA; and reached $20/20$ when the current intensity was increased to $2$ mA. The average time from the electrical stimulation to CA induction was $5.10\pm2.81$ s. When the electrical stimulation stopped, 18/20 rats had ventricular fibrillation and 2/20 rats had pulseless electrical activity. CPR was performed for averagely $207.4\pm148.8$ s. The restoration of spontaneous circulation was $20/20$. The death rate within 4 h after CA was $5/20$, and the 72-h survival rate was $10/20$. There were only two cases of complications, a minor muscle contraction and a minor lung lobe injury.

**Conclusion** The model of CA in rats induced by transcutaneous electrical epicardium stimulation is a stable model that requires low-intensity current and has fewer complications.

**e0006** EFFECTS OF NEOTYPE PERITONEAL COOLING ON THE INJURED OF INTESTINAL MUCOSUS AFTER CARDIOPULMONARY RESUSCITATION IN RABBITS

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**Objective** To explore whether the peritoneal cooling after cardiopulmonary resuscitation could improve the injured of intestinal mucous in rabbits.

**Methods** 36 adult New Zealand rabbits were induced ventricular fibrillation by AC current. After the restore of spontaneous circulation (ROSC), rabbits were randomly divided into three groups according to the way of body temperature controlling, that is, nonothermia group (NT), surface cooling group (SC) and peritoneal cooling group (PC). The changing of tympanic temperature and peritoneal temperature were observed after ROSC. The animals were sacrificed by over anaesthesia after ROSC for 12 h, the end ileum was removed and fixed in formalin, the histological injured and the expression of TNF-a and VCAM-1 in ileum were observed by H.E staining and immune chemical methods.

**Results** 12 animals in each group, 9 in group NT, 10 in group SC and 9 in group PC were successfully resuscitated; all animals were on mechanical ventilation for 2 to 4 h. 5, 6 and 8 animals in each group respectively survived to the end of the experiment. The temperatures of animals in group NT were maintained in normal range. The tympanic temperature of animals in group SC and PC was performed target temperatures at $29\pm6.55$ min and $62\pm2.27$ min. During the stage of maintenance of hypothermia, the tympanic and peritoneal temperatures of animals in group SC were in range 35 to 35°C, while the peritoneal temperatures of animals in group PC were in range 31 to 34°C, 1 to $2^\circ$C lower than the tympanic temperature. The scores of histological injured of ileum were $1.43\pm0.55$ in group PC, $3.4\pm0.55$ in group NT and $3.17\pm0.41$ in group SC. The differences among them were significantly. PC versus SC, $p<0.000$; NT versus PC, $p=0.000$; while SC versus NT, $p=0.30$. The expression of TNF-a in ileum was $9.98\pm1.79%$ in group NT, $5.87\pm1.43%$ in group SC and $3.78\pm0.53%$ in group PC, the differences among them were significantly. The phenomenon of the expression of VCAM-1 was little like the TNF-a, $3.78\pm0.55%$ in group PC was significantly from the $8.55\pm1.53%$ in group NT and $5.92\pm1.06%$ in group SC.

**Conclusion** The neotype peritoneal cooling can improve the injured of ileum mucous beside quickly induce hypothermia after ROSC in rabbits.

**e0007** THE EFFECT OF OMEPRAZOLE ON THE OXIDATIVE STRESS AND ACUTE ATRIAL ELECTRICAL REMODELLING IN RABBITS

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**Objective** To investigate the effect of omeprazole on the acute atrial electrical remodelling and oxidative stress status in rabbit atrial fibrillation (AF) model.

**Methods** 18 rabbits were randomly divided into atrial tachypacing (ATP) group, sham operating (SM) group, and atrial tachypacing with omeprazole therapy (A+O) group. In the ATP group and A+O group the right atrium was tachypaced at 600 bpm to induce AF. In SM group, the atrium was tachypaced in ATP group (from 0.10 to $5.37$ ms (p $<0.01$); but no change in A+O group, with ERP and Rate adaptive C lower than the tympanic temperature. The scores of histological injured of ileum were $1.43\pm0.55%$ in group SC and $3.78\pm0.53%$ in group PC was significantly. The phenomenon of the expression of VCAM-1 was little like the TNF-a, $3.78\pm0.55%$ in group PC was significantly from the $8.55\pm1.53%$ in group NT and $5.92\pm1.06%$ in group SC.

**Conclusion** The neotype peritoneal cooling can improve the injured of ileum mucous beside quickly induce hypothermia after ROSC in rabbits.