Conclusions The spleenic CD4+CD25+ treg and serum concentration of TGF-β1, IL-10 of mice were decreased and there were lower frequency of Foxp3+ and CD25+ cells in severe atherosclerotic plaques than in mild. It meant that CD4+CD25+ treg may has anti-atherosclerotic role on atherosclerotic progression.

### e0220 THE INVOLVEMENT OF IL-23/Th17 PATHWAY IN MURIN MODEL OF COXSAKIE VIRUS B3-INDUCED VIRAL MYOCARDITIS
doi:10.1136/hrt.2010.208967.220

Fan Yang, Weifeng Wu, Yuluan Yan, Qing Kong, Yu Pang. Department of Cardiology, The First Affiliated Hospital of Guangzhou Medical University, Nanning, China

**Background** The IL-23/Th17 pathway plays an important role in the development of chronic inflammatory diseases and autoimmune diseases. However, the role of the IL-23/Th-17 axis in the regulation of virus myocarditis (VMC) is still largely unknown.

**Methods** VMC was induced in male Balb/c mice by CVB3 peritoneal injection. Mice injected with PBS were taken as the controls. IL-23, VMC was induced in male Balb/c mice by CVB3 peritoneal injection. Mice injected with PBS were taken as the controls. IL-23, VMC was induced in male Balb/c mice by CVB3 peritoneal injection. Mice injected with PBS were taken as the controls. IL-23, VMC was induced in male Balb/c mice by CVB3 peritoneal injection. Mice injected with PBS were taken as the controls. IL-23,

**Results** Comparing with the controls, IL-23, IL-17 and RORγt mRNA in the myocardium of VMC were assessed by semi-quantitative RT-PCR on the time of 0, 1, 2, 3, 4 and 6 weeks after infection. IL-23, IL-17 protein from blood plasma was evaluated by ELISA. Flow cytometric analysis was used to evaluate the frequencies of Th17 subsets in CD4+ T cells. CD4+ T cells were isolated from VMC mice and cultured with rIL-23 in vitro to investigate the function of IL-23 in the IL-23/Th-17 pathway.

**Conclusions** The spleenic CD4+CD25+ treg and serum concentration of TGF-β1, IL-10 of mice were decreased and there were lower frequency of Foxp3+ and CD25+ cells in severe atherosclerotic plaques than in mild. It meant that CD4+CD25+ treg may has anti-atherosclerotic role on atherosclerotic progression.

### e0221 EFFECTS OF EXTRACORPOREAL CARDIAC SHOCK WAVE THERAPY ON EXPRESSION OF ENDOTHELIAL NITRIC OXIDE SYNTHASE AND BASIC FIBROBLAST GROWTH FACTOR IN SWINE WITH ACUTE MYOCARDIAL INFARCTION
doi:10.1136/hrt.2010.208967.221

1Shuai Sun, 2Tao Guo. 1Department of Cardiology, First People’s Hospital of Yunnan Province, Kunming, Yunnan, China; 2Department of Cardiology, First Affiliated Hospital of Kunming Medical College, Kunming, Yunnan, China

**Objective** To observe the effects of extracorporeal cardiac shock wave therapy (CSWT) on cintent of endothelial nitric oxide synthase (eNOS) and basic fibroblast growth factor (bFGF) in serum and myocardial tissue in swine with acute myocardial infarction (AMI).

**Methods** 12 Model swines with acute myocardial infarction was made, and were randomly divided into two groups with six in each group: simplex myocardial infarction as the control group and the experimental group which received CSWT treatment. (three times on the first, third, fifth days after operation. 200 hit/point. Total: 12 points. Energy: 0.09 mJ/mm²). Peripheral blood was extracted at eight different time points before and after operation (immediate, the first, third, fifth days, 1, 2, 3, 4 weeks after operation) to detect serum eNOS content with enzymelinked immunosorbent assay.

**Results** eNOS rose up in the experimental group 1 day after CSWT and a reached the peak on the fifth day, whereas eNOS gradually reduced in the control group, which showed significant difference between the two groups (p<0.01). Detection with semi quantitites RT-PCR of myocardial tissues of infarction border area showed that eNOS and bFGF expression in the experimental group were obviously higher than those in the control group (eNOS 27.705 ± 4.13) vs (16.445 ± 5.21) (bFGF 52.571 ± 4.23) vs (17.858 ± 4.17 p<0.01).

**Conclusions** Extracorporeal cardiac shock wave therapy of acute myocardial infarction can effectively promote rise of eNOS and bFGF, which may be a new way to cure AMI.

### e0222 EFFECTS AND FUNCTION MECHANISM OF HYDROGEN SULFIDE ON MYOCARDIAL ISCHAEMIA REPERFUSION ARRHYTHMIA IN RATS
doi:10.1136/hrt.2010.208967.222

1Chen Xuehui, 1Li Peng, 2Huang Xiaoping, 3Wang Dongming, 2Chen Songming, 1Yang Zeming, 1 Chen Zhiyan, 4Yu Wenmin, 3 Chen Liping. 1The 2nd People’s Hospital of Futian District, Shenzhen, Guangdong, China; 2The First Affiliated Hospital of Shantou University Medical College, Shantou, Guangdong, China

**Objective** To explore the Effects and Function Mechanism of hydrogen sulfide on Myocardial Ischaemia reperfusion Arrhythmia in Rats.

**Methods** We used sodium hydrosulfide (NaHS) as the donor of H2S, SD rats were randomly divided into sham group, Myocardial Ischaemia reperfusion group (IR group), IR+NaHS group, and IR+NaHS+ glibenclamide group. We monitor the Haemodynamics of rats, including heart rate, arterial pressure, left ventricular pressure et al. We also observe the rate of ventricular arrhythmia in each group.

**Result** H2S can significantly reduces rats’ heart rate, arterial pressure and left ventricular pressure. It also reduces the rate of ventricular arrhythmia in Myocardial Ischaemia reperfusion Rats. The KATP Channel Blocker glibenclamide can weaken the H2S Antiarrhythmic effects (p<0.01).

**Conclusions** H2S can reduce the rate of ventricular arrhythmia in Myocardial Ischaemia reperfusion Rats. The Function Mechanism may be associated with the KATP signal transduction pathway in cells.

### e0223 EFFECTS OF NEOTYPE PERITONEAL COOLING ON THE INJECTED OF INTESTINAL MUCOS MUCOSU YCARPOPU LON RESUSCITATION IN RABBITS
doi:10.1136/hrt.2010.208967.223

Xuan Dai, Xiao-xing Liao, Chun-Lin Hu, Hong-Yan Wei, Xin Li, Hong Zhan. Department of Emergency Medicine, The First Affiliated Hospital of Sun Yat-Sen University, Guangzhou, China

**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 normothermia 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...