

impact of high-normal level of FT4 on recurrence after catheter ablation of AF.

**Methods** Two hundred and forty-four consecutive patients with paroxysmal AF underwent circumferential pulmonary vein isolation (PVI) were prospectively enrolled. Exclusion criteria included prior or current thyroid dysfunction on admission, amiodarone medication for three months before admission.

**Results** After a mean follow-up of  $416 \pm 204$  (91–856) days, the recurrence rates were 14.8%, 23.0%, 33.3%, 38.7% from the lowest FT4 quartile to the highest FT4 quartile, respectively ( $p=0.016$ ). Adjustment for age, gender, left atrium diameter, PVI, there was an increased risk of recurrence in the subjects with the highest FT4 quartile compared with those with the lowest quartile (HR 3.31, 95% CI 1.45 to 7.54,  $p=0.004$ ). As a continuous variable, FT4 was also an independent predictor of recurrence (HR 1.10, 95% CI 1.02 to 1.18,  $p=0.016$ ).

**Conclusions** Patients with high-normal thyroid function were at an increased risk of AF recurrence after catheter ablation.

**e0575 B-TYPE NATRIURETIC PEPTIDE ON CORONARY CIRCULATION IN YORK PIGS MODEL OF ACUTE MYOCARDIAL INFARCTION WITH HEART FAILURE**

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**Objective** To evaluate the impact of intravenous administration of rhBNP on coronary artery haemodynamics in York pigs model of AMI-HF.

**Methods** Total of 14 York pigs were included in this study. The AMI-HF models was made by coronary occlusion and microthrombi perfusion, pigs were randomised into saline group and rhBNP group. Administration of rhBNP (bolus of  $1.5 \mu\text{g}/\text{kg}$  followed by a continuous infusion of  $0.01 \mu\text{g} \cdot \text{kg}^{-1} \cdot \text{min}^{-1}$  for 60 min, and then the dosage can be increased to  $0.02-0.03 \mu\text{g} \cdot \text{kg}^{-1} \cdot \text{min}^{-1}$  until LVEDP $<12$  mm Hg, maintaining MBP $\geq 65$  mm Hg) in rhBNP group. The saline group was given equal volume of normal saline using the same method. Coronary pressure ( $P_c$ ), the average peak velocity (APV), coronary vascular resistance (CR), coronary flow reserve (CFR) and coronary diameter were recorded simultaneously at baseline, instant after the model established, 60min after continuous infusion of  $0.01 \mu\text{g} \cdot \text{kg}^{-1} \cdot \text{min}^{-1}$  rhBNP and the time point of LVEDP $<12$  mm Hg. The coronary blood flow was measured at rest and maximal hyperaemia.

**Results** 12 animals achieved the standard of AMI-HF model successfully, the observation parameters were recorded at baseline before balloon occlusion, instant after the model established, 60min after continuous infusion of  $0.01 \mu\text{g} \cdot \text{kg}^{-1} \cdot \text{min}^{-1}$  rhBNP and the time point of LVEDP decreased to  $<12$  mm Hg. 1. Changes of Coronary artery parameters: There is no significant difference of coronary diameter, APV, CR and CFR in saline group. Coronary artery diameter increased after rhBNP administration. According to the intracoronary Doppler flow results, APV and CBF were significantly increased and CR decreased after rhBNP administration. CFR was significant rebound after continuous infusion of  $0.01 \mu\text{g} \cdot \text{kg}^{-1} \cdot \text{min}^{-1}$  rhBNP for 30 min. And compared with the control group at the same observation point, APV and CBF significantly increased and CR significantly decreased at the stage of infusion  $0.010 \mu\text{g} \cdot \text{kg}^{-1} \cdot \text{min}^{-1}$  Doppler parameters of renal artery, there was no difference of rhBNP. LVEF measured by echocardiography was lower than baseline after the models established and tended to increase after administration of rhBNP, but no significance was found compared with that in saline Group and that immediate after models established.

**Conclusion** It could increase blood flow of injury coronary artery, improve CFR and improve the coronary and administration of rhBNP in pigs with AMI-HF.

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**e0576 CLINICAL ANALYSIS OF ANTICOAGULANT TREATMENT IN ACUTE PULMONARY EMBOLISM STRATIFIED AS INTERMEDIATE-RISK**

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**Objective** To analyse the clinical effect of anticoagulant treatment in acute pulmonary embolism stratified as intermediate-risk.

**Method** Patients with intermediate-risk acute pulmonary embolism (PE) were enrolled in Center for Pulmonary Vascular Diseases, Fu Wai Hospital between Aug 2008 and Apr 2010. The intermediate-risk acute PE was defined as stable haemodynamics and the presence of right ventricular dysfunction (echocardiography or CT showed right ventricle dilation, pressure overload, BNP or NT-proBNP elevation) and/or markers of myocardial injury (stratified as intermediate-risk acute pulmonary embolism were included in this study. There were 29 men (42.6%) and 39 women (57.4%) with a mean age of  $61.7 \pm 13.4$  years. Right ventricle (RV) dilatation or pressure overload was present on echocardiography or CT in 49 cases (%), NT-proBNP elevation in 58 cases (%) and cardiac troponin I positive in 8 cases (%). The mean onset time was  $15.7 \pm 18.0$  days. The main complaints included dyspnoea (60 patients, 88.2%), chest pain (16 patients, 23.5%), cough (16 patients, 23.5%), haemoptysis (8 patients, 11.8%), syncope (7 patients, 10.3%), palpitation (5 patients, 7.4%), dizziness (4 patients, 5.9%) and cyanosis (1 patient, 1.5%). Referring to ECG, 34 cases (50%) presented S1QIIITIII and 27 cases (39.7%) with T wave inversion in V1–V4 leads. The symptoms, physical signs and results of laboratory tests were improved significantly after anticoagulation by heparin or low molecular weight heparin with a target INR of : heart rate ( $82.5 \pm 14.8$  vs  $69.9 \pm 7.5$  beats/min,  $p<0.001$ ) and D-dimer ( $5.8 \pm 4.7$  mg/l vs  $1.1 \pm 1.2$  mg/l,  $p<0.001$ ) CTnT or CTnI) positive.

**Results** Sixty-eight patients significantly decreased; PaO<sub>2</sub> ( $68.7 \pm 11.7$  mm Hg vs  $85.4 \pm 31.3$  mm Hg,  $p<0.001$ ), PCO<sub>2</sub> ( $37.2 \pm 5.3$  mm Hg vs  $40.3 \pm 4.6$  mm Hg,  $p<0.001$ ) and SaO<sub>2</sub> ( $93.5 \pm 3.4\%$  vs  $95.6 \pm 2.1\%$ ,  $p<0.001$ ) significantly increased. During hospitalisation, ALT or AST was slightly increased in 12 cases (%) and became normal after regular treatment; Twelve patients had mild bleeding, including 4 cases with positive urine occult blood, 4 cases with slight conjunctival haemorrhage, 2 cases with slight haemoptysis and 1 case with positive fecal occult blood.

**Conclusions** Anticoagulant treatment to patients with acute pulmonary embolism stratified as intermediate-risk significantly improved the symptoms, physical signs and results of laboratory tests with slight and low occurrence rate of complications.

**e0577 CLINICAL ANALYSIS OF FALSE NEGATIVE CASES BY VENTILATION–PERFUSION SCINTIGRAPHY COMPARED TO CT PULMONARY ANGIOGRAPHY IN DIAGNOSIS OF ACUTE PULMONARY EMBOLISM**

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**Objective** Although ventilation–perfusion scintigraphy (V/Q scan) is a robust and well established diagnostic test for suspected pulmonary embolism, false negative cases still exist. This study