sepsis was highly suspected. Over the next 6 hours, fluid resuscitation, hemodynamic support, antibiotic therapy and immunoglobin therapy were administered, but she also decompensated and went into refractory shock. In order to detect a possible infective source of the sepsis, The contrast enhanced CT scans of the chest and abdomen was arranged immediately, which demonstrated thrombosis of inferior vena cava and total occlusion below the origin of the renal veins and extending into bilateral common iliac vein.

RESULTS The patient was transferred to EICU for further treatment. Her hemodynamics was gradually stabilizing by fluid resuscitation from upper extremity. She was treated for prolonged periods with antibiotics. Anticoagulation therapy was never administered because of coagulation disorder. Complete resolution of IVC thrombus was documented on reexamination of Contrast-enhanced CT scans after 11 days. The patient was discharged and followed up after 5 months, She improved with no further admission with the same complaints.

CONCLUSIONS It remains great challenging for clinician to make an accurate diagnosis of IVCT at the early stage in sepsis because of the lacking of characteristic clinical manifestations. Sepsis is associated with complex procoagulant and anticoagulant changes that modify inflammatory response, which may through cross signaling results in immunothrombosis. In this case, IVCT may be an immune response in the local activation of coagulation facilitates the recognition and destruction of pathogens. In acute IVCT, sudden fall in venous return contributes to hemodynamic deterioration, resulting in life-threatening condition as refractory shock. IVCT is occurring autolysis after improvement of sepsis without anticoagulation therapy in this patient. According to a recently described new theory, patients may benefit from modulation of the coagulation system when systemic inflammation and hypercoagulopathy exist in sepsis.

GW28-e1089

The effect of comorbidity on the clinical course of CHD and life's quality

Esmeralda Akhmedova,[1] Bakhodir Mardanov,[1] Mekhman Mamedov[1]
[1]National Research Center for Preventive Medicine

OBJECTIVES **The aim of study**. The study of the quality of life and clinical and laboratory indicators in patients with stable coronary heart disease (CHD) and in combination with diabetes mellitus type 2 (T2DM) and chronic obstructive pulmonary disease (COPD).

METHODS Included 67 patients of both sexes, aged 39-69 years. All patients were divided into 3 groups: patients with CHD (group I, n = 21, mean age 55.4 ± 6.8 years, male/female 16/5), with CHD and T2DM (group II, n = 21, mean age 58.8 ± 8.9 years, male/female 18/6), and CHD with COPD (group III, n = 22, mean age 59.2 ± 5.2 years, male/female 16/6). Clinical and anamnestic indices, heart rate at rest, ECG in 12 standard leads, blood pressure measurement, echocardiographic study, biochemical blood test, and quality of life of patients using the international questionnaire EQ-5D were evaluated.

RESULTS In the CHD group with or without diabetes, the incidence of obesity is high, while in the COPD group, the mean BMI was below 29 kg/m2. According to the EQ-5 questionnaire, the decline in the quality of life of patients with CHD and diabetes was mainly due to such items as "discomfort", "daily activities" and "anxiety/depression". In patients with concomitant COPD, the maximum number of points was scored on the items responsible for "mobility", "anxiety/depression". In the absence of an explicit dilatation of the left ventricular cavity, relatively low values of the left ventricular ejection fraction relative to patients with isolated CHD were noted in group II and III patients. In patients with COPD and CHD, signs of an overload of the left atrium are revealed. Patients of group III were characterized by the presence of dopplerographic signs of pulmonary hypertension. The combination of CHD with diabetes and COPD was accompanied by an increase in plasma concentrations of urea, as well as more pronounced dyslipidemia.

CONCLUSIONS Concomitant diabetes and COPD contribute to worsening of the patients with CHD, characterized by a decrease in the quality of life of patients, increased plasma concentrations of urea, as well as more pronounced dyslipidemia in CHD patients.

GW28-e1141

Feasibility study of Emergency intervention for vascular injury outside hospital

Ming Liang,[1] Jingjing Rong,[1] Jingyang Sun,[1] Xiaozeng Wang,[1] Fei Li,[1] Geng Wang,[1] Yanchun Liang,[1] Yaling Han,[1] Wang Shuang[1]
[1]Department of Cardiology, Institute of Cardiovascular Research of People's Liberation Army

OBJECTIVES Minimally invasive surgery in the field of traumatic vascular injuries diagnosis and treatment has achieved good results. This study was designed to find out whether it is feasible for pre-hospital emergency intervention on vascular injury in Field intervention cabin under the condition of war front or disaster site.

METHODS Different types of animal experiments on vascular injury intervention were carried out in the field intervention cabin. Treatment capacity was evaluated by data collection which contained duration of surgery, clinical evaluation, image clarity, equipment handling. Environmental adaptability and mobility were evaluated by maneuver and long-distance mobility.

RESULTS A total of 56 surgeries (7 types) were performed in the field intervention cabin. Digital Subtraction Angiography(DSA) had good imaging performance. A totally 4800 kilometres long-distance mobility was performed, all the equipment operating normally without any equipment failure. We had participated in the medical service maneuver for two time. The cabin unfolded and worked properly. There was no equipment damage during the medical service maneuver.

CONCLUSIONS It is feasible for pre-hospital emergency intervention on vascular injury in the Field intervention cabin under the condition of war front or disaster site.

GW28-e1142

Thrombin-loaded alginate-calcium microspheres: a novel hemostatic embolic material for transcatheter arterial embolization

Jingjing Rong,[1] Ming Liang,[1] Fengqi Xuan,[1] Jingyang Sun,[1] Lijun Zhao,[1] Huizhen Zheng,[1] Xiaoxiang Tian,[1] Dan Liu,[1] Quanyu Zhang,[1] Chengfei Peng,[1] Fei Li,[1] Xiaozeng Wang,[1] Yaling Han,[1] Weiting Yu,[1] Wang Shuang[1]
[1]Department of Cardiology, Institute of Cardiovascular Research of People's Liberation Army

OBJECTIVES Transcatheter arterial embolization (TAE) is the best non-laparotomy choice for solid visceral organs rupture and bleeding nowadays. In this study, a new biodegradable macromolecule material thrombin-loaded alginate-calcium microsphere (TACM) was prepared and its characteristics were investigated preliminarily.

METHODS Biocompatibility, physical characteristic, and application method of TACMs were studied in vivo and vitro, including Skin irritation test, Micronucleus test, Cytokine production, tracing test, and stress resistance experiment. And then, the Embolic effect and post-procedural complications of TACMs with thrombus (embolic agent) were further investigated by the splenic injury model of large animal.

RESULTS The in vivo results attested that TACMs were biocompatible with non-irritating and -genotoxic, but leading to slightly and temporary inflammation. Application research showed the function of thrombin was inhibited by common contrast agents, and it was impracticable to add contrast agents in TACMs with thrombus for tracing under X-rays in TAE. Then, a novel delivery method was developed. In addition, stress resistance test indicated the TACMs with thrombus was significantly stronger than single autologous thrombus, the optimized ratio of TACMs to whole blood was 2:3 for forming mixed thrombus. Finally, large animal experiment revealed the novel embolic agent -TACMs mixed thrombus was effective and safe in treating hemorrhage of solid abdominal viscera by TAE.

CONCLUSIONS The TACMs mixed thrombus, as a kind of novel embolic agent for TAE, had advantages of rapid and reliable embolic hemostasis, generally application, and readily operation. The development and application of TACMs are promising in improving the effect and prognosis of transcatheter hemostasis for solid visceral rupture and hemorrhage.

GW28-e1143

Biocompatibility and effectiveness evaluation of a new hemostasic embolization agent: thrombin-loaded alginate-calcium microspheres

Lijun Zhao,[1] Yang Li,[1] Jingjing Rong,[1] Ming Liang,[1] Xuwen Zhang,[1] Jingyang Sun,[1] Li Jun,[1] Dan Liu,[1] Naijing Gao,[1] Fei Li,[1] Xiaozeng Wang,[1] Yaling Han,[1] Wang Shuang[1]
[1]Department of Cardiology, Institute of Cardiovascular Research of People's Liberation Army

OBJECTIVES Until now, there has been no ideal embolization agent for hemorrhage in interventional treatment. In this study, the thrombin was encapsulated in alginate-calcium microspheres using electrostatic droplet technique to produce a new embolization agent: