

dosage of blood products and peritoneal dialysis were found to be risk factors for VAEs. Compared with non-VAE group, VAEs were closely related to higher mortality, longer intensive care unit stay time and hospitalization time. In addition, 91 strains of pathogens were isolated from endotracheal aspirates of 81 patients with VAE, of which *Pseudomonas aeruginosa* was the most common pathogenic microorganism (30 isolates, 37.0%), followed by *Acinetobacter baumannii* (27 isolates, 33.3%) and other five types.

**CONCLUSIONS** VAE algorithm is a valid and reliable surveillance for possible infections caused by mechanical ventilation, which could easily occur in patients after cardiac surgery and is associated with poor prognosis. The risks and pathogens that we have investigated will provide potential preventive strategies.

#### GW28-e0654

##### Percutaneous Catheter Drainage for Fatal Hemopericardial Tamponade due to Radiotherapy in Lung Cancer

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**OBJECTIVES** Cardiac tamponade is a life-threatening medical emergency. We introduce a new technique for fatal hemopericardial tamponade due to radiotherapy in lung cancer via percutaneous catheter drainage.

**METHODS** An 53-year-old woman who had radiation therapy (60.0Gy) for lung cancer was presented to the emergency department with dyspnea, dizziness and low blood pressure. Chest computed tomography showed large pericardial effusion. We performed percutaneous catheter drainage for the pericardium, with 750 mL of hemopericardial effusion drained in the first day, 350ml, 200ml, 80ml, 20ml in the 2<sup>nd</sup>, 3<sup>rd</sup>, 4<sup>th</sup> and 5th day, respectively.

**RESULTS** The patient relived, no complications.

**CONCLUSIONS** We should pay close attention to the possibility of pericardial tamponade due to radiotherapy, and the percutaneous catheter drainage is an effective means for pericardial tamponade.

#### GW28-e0768

##### Study on the general misdiagnosis situation of the aortic dissection in China based on the big data of misdiagnosis Literature database (2004-2013)

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**OBJECTIVES** To evaluate the misdiagnosed profile for aortic dissection(AD) in China using big data.

**METHODS** The 505 misdiagnosis literature about AD in the misdiagnosis literature database from 2004 to 2013 were selected and analyzed.

**RESULTS** (1) The 157 pieces literature (31.09%) for AD were found with describing of disease misdiagnosis.(2) The 2163 patients were misdiagnosed in the total number of 5606 cases, and the misdiagnosis rate was 38.58%. Some cases were misdiagnosed repeatedly, which got to 3775 times misdiagnosis.(3)The circulatory system (50.38%), the digestive system (19.22%) and the nervous system (8.55%) ranked the top three in the system distribution of the misdiagnosed diseases.(4) The top three items among the high frequency misdiagnosed diseases were ACS(44.1%), acute cerebrovascular diseases (6.64%) and acute pancreatitis (6.35%) sequentially.

**CONCLUSIONS** The misdiagnosis rate of AD is high in China. To mastering the misdiagnosis principle for AD is instructive to avoid the clinical misdiagnosis and mistreatment.

#### GW28-e0773

##### Exosomes are Potential Novel Mediators for Microbubbles Enhanced Ultrasound Cavitation-Induced Cardiovascular Anti-inflammatory Therapies

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**OBJECTIVES** Ultrasound alone or combined with contrast agent microbubbles offers wide-spread applicability, ranging from well-established diagnostic tools to adjunctive therapeutic methods. Ultrasound could elicit anti-inflammatory and tissue stimulating effects, as already shown in clinical trials and experimentally. Several reports have demonstrated that ultrasound affects cells that are centrally involved in the immune response. However, the mechanism of this effect, we still unknown.

**METHODS** Using experimental database mining and statistical analysis methods we developed the following findings.

**RESULTS** 1) Microbubbles can enhance exosome delivery by ultrasound cavitation effect on increasing immunosuppressive cellular permeability in cardiovascular tissue; 2) Various anti-inflammatory molecules including microRNAs and anti-inflammatory cytokines and chemokines can mediate the anti-inflammatory effects of immunosuppressive cell-derived exosomes by microbubbles enhanced ultrasound cavitation in cardiovascular tissue.

**CONCLUSIONS** Our results suggest that exosomes are potential novel mediators for microbubbles enhanced ultrasound cavitation-induced in cardiovascular tissue anti-inflammatory therapies.

#### GW28-e0815

##### Challenges in early diagnosis of superior mesenteric artery syndrome: a case report and review of the literatures

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**OBJECTIVES** Superior mesenteric artery syndrome (SMAS), also known as Wilkie's syndrome, is a rare cause of acute abdominal pain. The diagnosis of SMAS is often delayed and misdiagnosed. To report the early diagnosis of a SMAS in emergency department(ED) and review the diagnostic strategies of this rare disease.

**METHODS** A 19-year-old thin female patient was admitted to ED with postprandial epigastric pain accompanied by intractable vomiting lasting for 3 days. Tracing back her history, the patient denied any significant systemic disease. A general physical examination revealed epigastric tenderness without peritoneal irritation signs, other systems were normal. Her white blood cell count was 11,520/mm<sup>3</sup>, granulocyte proportion was 84.9%, K 3.4 mmol/L, other blood tests were normal. Abdominal erect and supine radiograph, abdominal ultrasound, upper gastrointestinal endoscopy also were normal. The abdominal computed tomographic angiography(CTA) was initially reported as normal. Antibiotic therapy, esomeprazole and anisodamine were administered intravenously, her abdominal pain and vomiting were recurrent after eating. On second review of the images of CTA with an experienced emergency clinicians, The angle of the SMA in relation to the abdominal aorta was narrower compared with normal. After clinical suspicion and radiological findings, diagnosis of SMAS was achieved after upper gastroenterography, which was demonstrated dilation of the proximal duodenum with abrupt cut-off at its third part.

**RESULTS** Electrolyte imbalance was corrected and nutritional support was provided for 5 days. Her symptoms were gradually improved and discharged. The patient was followed up after 9 months, She improved with no further admission with the same complaints and was pregnancy now.

**CONCLUSIONS** SMAS is a very rare cause of the upper gastrointestinal system obstruction but worth to remember disease. The pathophysiology entails the loss of the fat pad between the superior mesenteric artery and the abdominal aorta., which leads to decrease in Aortomesenteric angle and the third part of the duodenum is compressed. The symptoms of SMAS are usually nonspecific and that easy to make an original misdiagnosis and mismanaged. Both CTA and upper gastroenterography have been used to diagnose SMAS. The early accurate diagnosis is based on experience with increased awareness of SMAS. In this patient, We do not accept radiology reports at face value due to high degree of suspicion of SMAS, As a second opinion from a more experienced clinician make early diagnosis. Once diagnosed, conservative treatment with nutritional support and positioning should be tried first, surgery may be considered when conservative treatment fails as well for patients with recurrent symptoms. In conclusion, We suggest that CTA and upper gastroenterography should be early done leading to diagnose SMAS in thin patients with recurrent postprandial epigastric pain incorporating intractable vomiting.