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Abstract Introduction

Four in current issue and four in online first

Leveraging a Critical Care Database: Selective Serotonin Reuptake Inhibitor Use Prior to ICU Admission Is Associated With Increased Hospital Mortality

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- **Background:**

- Observational studies have found an increased risk of adverse effects such as hemorrhage, stroke, and increased mortality in patients taking selective serotonin reuptake inhibitors (SSRIs). 服SSRI增加不良反应及死亡率
- The impact of prior use of these medications on outcomes in critically ill patients has not been previously examined. 重症患者早期服此药结局未知
- We performed a retrospective study to determine if preadmission use of SSRIs or serotonin norepinephrine reuptake inhibitors (SNRIs) is associated with mortality differences in patients admitted to the ICU. 判断入ICU前服SSRI/SNRI是否致ICU患者死亡率差异

- **Methods:**

- The retrospective study used a modifiable data mining technique applied to the publicly available Multiparameter Intelligent Monitoring in Intensive Care (MIMIC) 2.6 database. 应用于重症多参数智能监护 (MIMIC) 2.6 公共数据库的可修改数据挖掘技术

- A total of 14,709 patient records, consisting of 2,471 in the SSRI/SNRI group and 12,238 control subjects, were analyzed. The **study outcome** was in-hospital mortality. 院内死亡率作为研究终点
- **Results:**
- After adjustment for age, Simplified Acute Physiology Score, vasopressor use, ventilator use, and combined Elixhauser score, SSRI/SNRI use was associated with significantly increased in-hospital mortality (OR, 1.19). 统计学校正后, SSRI/SNRI的使用与院内死亡率呈明显正相关
- Among patient subgroups, risk was highest in patients with acute coronary syndrome (OR, 1.95) and patients admitted to the cardiac surgery recovery unit (OR, 1.51). 急性冠脉综合症和入心脏外科恢复室的患者的死亡风险更高
- Mortality appeared to vary by specific SSRI, with higher mortalities associated with higher levels of serotonin inhibition. 死亡率随具体应用的SSRI品种有所变化。血清素抑制水平高, 死亡风险高。

- **Conclusions:**

- We found significant increases in hospital stay mortality among those patients in the ICU (taking SSRI/SNRIs prior to admission) as compared with control subjects. 院前正在服用SSRI / SNRI患者的ICU内死亡率显著增加
- Mortality was higher in patients receiving SSRI/SNRI agents that produce greater degrees of serotonin reuptake inhibition. 服用对血清素再摄取抑制水平较高的上述药物者死亡风险更高
- The study serves to demonstrate the potential for the future application of advanced data examination techniques upon detailed (and growing) clinical databases being made available by the digitization of medicine. 或可应用先进的数据检测技术对医学数字化后所取得的更加详细（或逐渐增多的）临床数据库资料作进一步的分析利用。

Long term outcomes following development of new-onset atrial fibrillation during sepsis

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- **Background:**
- New-onset atrial fibrillation (AF) is associated with adverse outcomes during a sepsis hospitalization; however, long-term outcomes following hospitalization with sepsis-associated new-onset AF are unclear. 新发房颤与脓毒症患者住院期间的不良结局相关，但长期预后未知。
- **Methods:**
- We used a Medicare 5% sample to identify patients who survived hospitalization with sepsis from 1999-2010. 医疗保险5%样本中幸存者
- AF was defined as ‘no AF’, ‘prior AF’, or ‘new-onset AF’ based on AF claims during and prior to a sepsis hospitalization. 根据理赔情况分为“无房颤”、“原有房颤”或“新发房颤”。
- We used competing risk models to determine five-year risks for AF occurrence, heart failure, ischemic stroke, and mortality after the sepsis hospitalization, according to AF status during the sepsis admission. 判断脓毒症患者发生房颤、心衰、缺血性中风的五年风险和出院后的死亡率

- **Results:**

- We identified 138,722 sepsis survivors of whom 95,536 (69%) had no AF during sepsis, 33,646 (24%) had prior AF, and 9540 (7%) had new-onset AF during sepsis.
- AF occurrence following the sepsis hospitalization was more common among patients with new-onset AF during sepsis (54.9%) than patients with no AF during sepsis (15.5%).新发房颤的患者比没有发房颤的患者出院后更容易发生房颤
- Compared to patients with no AF during sepsis, those with new-onset AF during sepsis had greater five-year risks of hospitalization for heart failure [11.2% vs 8.2%], ischemic stroke [5.3% vs 4.7%] and death [74.8% vs 72.1%].新发房颤的脓毒症患者5年内发生心衰、缺血性中风和死亡的风险更高。

- **Conclusions:**

- Most sepsis survivors with new-onset AF during sepsis have AF occur after discharge from the sepsis hospitalization, and have increased long-term risks for heart failure, ischemic stroke and death. 出院后会再发房颤，5年内发生心衰、缺血性中风和死亡的风险增加
- Our findings may have implications for post-hospitalization surveillance of patients with new-onset AF during a sepsis hospitalization. 出院后继续常规监测

Adverse Respiratory Effect of Acute β -Blocker Exposure in Asthma: A Systematic Review and Meta-analysis of Randomized Controlled Trials

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- **Background:**
- β -Blockers are avoided in asthma over concerns regarding acute bronchoconstriction. Risk is greatest following acute exposure, including the potential for antagonism of β_2 -agonist rescue therapy. β 受体阻滞剂的急性暴露及它对 β_2 受体激动剂抢救治疗的潜在拮抗作用是最大风险
- **Methods:**
- A systematic review of databases was performed to identify all randomized, blinded, placebo-controlled clinical trials evaluating acute β -blocker exposure in asthma.
- Effect estimates for changes in respiratory function, symptoms, and β_2 -agonist response were pooled using random effects meta-analysis with heterogeneity investigated. 随机效应荟萃分析方法以及异质性分析，评估了急性 β 受体阻滞剂暴露对呼吸功能、临床症状以及 β_2 受体激动剂反应的影响

- **Results:**
- Acute selective β -blockers in the doses given caused——
- a mean change in FEV₁ of -6.9%, a fall in FEV₁ of $\geq 20\%$ in one in eight patients ($P = .03$), symptoms affecting one in 33 patients ($P = .18$), and attenuation of concomitant β_2 -agonist response of -10.2%. 使合用的 β_2 受体激动剂效果衰减10.2%
- Corresponding values for acute nonselective β -blockers in the doses given——
- were -10.2%, one in nine patients ($P = .02$), one in 13 patients ($P = .14$), and -20.0%.
- Following investigation of heterogeneity, clear differences were found for celiprolol and labetalol. 塞利洛尔、拉贝洛尔
- A dose-response relationship was demonstrated for selective β -blockers. 选择性 β 受体阻滞剂急性暴露对受试者的上述影响存在量-效关系

- **Conclusions:**
- Selective β -blockers are better tolerated but not completely risk-free.
- Risk from acute exposure may be mitigated using the smallest dose possible and β -blockers with greater β_1 -selectivity.
- β -Blocker-induced bronchospasm responded partially to β_2 -agonists in the doses given with response blunted more by nonselective β -blockers than selective β -blockers. 与选择性 β 受体阻滞剂相比，非选择性 β 受体阻滞剂引起的支气管痉挛对 β_2 受体激动剂抢救治疗的反应更差
- Use of β -blockers in asthma could possibly be based upon a risk assessment on an individual patient basis. 哮喘患者 β 受体阻滞剂的应用可能要基于一个个体基础上的风险评估

Thrombosis Prophylaxis and Mortality Risk among Critically Ill Adults

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- **Background:**

- The optimal approach for managing increased risk of venous thromboembolism (VTE) among critically ill adults is unknown.

- **Methods:**

- An observational study of 294,896 episodes of critical illness among adults was conducted in 271 geographically dispersed United States adult intensive care units.
- The primary outcomes were all cause ICU and in-hospital mortality after adjustment for acuity and other factors among groups of patients assigned, based on clinical judgment, to prophylactic anticoagulation, mechanical devices, both or neither. 预防性抗凝组、机械装置组、两者均有组及两者均无的空白对照组,主要结果为所有经灵敏度及组间其他因素校正后影响ICU和住院死亡率的因素
- Outcomes of those managed with prophylactic anticoagulation or mechanical devices were compared in a separate paired propensity matched cohort. 结局指标采用单独配对倾向的配对队列研究进行比较

- **Results:**

- The group treated with prophylactic anticoagulation was the only one with significantly lower risk of dying than those not provided VTE prophylaxis .
- The mortality risk of those receiving mechanical devices was not lower than that of patients without VTE prophylaxis.
- A study of 87,107 pairs of patients matched for propensity to receive VTE prophylaxis found that those managed with prophylactic anticoagulation had significantly lower risk of death than those receiving only mechanical device prophylaxis. 根据接受VTE预防性治疗倾向性配对的患者的研究发现，那些预防性抗凝治疗的患者相较那些只接受预防性机械装置治疗的患者死亡风险明显降低

- **Conclusions:**

- These findings support a recommendation for prophylactic anticoagulation in preference to mechanical device prophylaxis for critically ill adults that do not have a contraindication to anticoagulation. 因此本文建议对那些无抗凝治疗禁忌症的危重成人预防血栓形成时首选抗凝治疗而非机械装置治疗

Ultrasound Assessment of Pulmonary Embolism in Patients Receiving CT Pulmonary Angiography

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- **Background:**
- CT pulmonary angiography (CTPA) is considered the gold standard for the diagnosis of pulmonary embolism (PE) and is frequently performed in patients with cardiopulmonary complaints.
- However, indiscriminate use of CTPA results in significant exposure to ionizing radiation and contrast.
- We studied the accuracy of a bedside ultrasound protocol to predict the need for CTPA. 床边超声检查预测CTPA必要性
- **Methods:**
- This was an observational study performed by pulmonary/critical care physicians trained in critical care ultrasonography.
- Screening ultrasonography was performed when a CTPA was ordered to rule out PE.

- The ultrasound examination consisted of a limited ECG, thoracic ultrasonography, and lower extremity deep venous compression study.
- We predicted that **CTPA would not be needed** if either DVT was found or clear evidence of an alternative diagnosis was established.
- CTPA parenchymal and pleural findings, and, when available, formal DVT and ECG results, were compared with our screening ultrasound findings. 将超声筛查结果与肺实质和胸膜的CTPA结果、及其可用的、正式深静脉血栓和心脏超声检查结果作对比
- **Results:**
- Of 96 subjects who underwent CTPA, 12 subjects (12.5%) were positive for PE. All 96 subjects had an ultrasound study; two subjects (2.1%) were positive for lower extremity DVT,
- and 54 subjects (56.2%) had an alternative diagnosis suggested by ultrasonography, such as alveolar consolidation consistent with pneumonia or pulmonary edema, which correlated with CTPA findings.
- In no patient did the CTPA add an additional diagnosis over the screening ultrasound study. CTPA没能在超声筛查基础上有新发现

- **Conclusions:**

- We conclude that ultrasound examination indicated that CTPA was not needed in 56 of 96 patients (58.3%).
- A screening, point-of-care ultrasonography protocol may predict the need for CTPA.
- Furthermore, an alternative diagnosis can be established that correlates with CTPA.
- This study needs further verification, but it offers a possible approach to reduce the cost and radiation exposure that is associated with CTPA
- ①根据超声检查结果，上述96例受试者中的56例并无行CTPA检查的必要
- ②一个关注检查部位的超声筛查方案或能预测出哪些患者需行CTPA检查
- ③超声检查可明确患者可能的其它诊断，而且的诊断效果与CTPA基本一致
- 尽管上述研究还需进一步验证，但它为大家提供了一种减少CTPA使用的费用及电离辐射暴露的可能方法。

Detection of Fibroproliferation by Chest High Resolution Computed Tomography in Resolving Acute Respiratory Distress Syndrome

Ellen L. Burnham, MD; Robert C. Hyzy, MD; Robert Paine, III, MD; Aine M. Kelly, MD;科罗拉多大学医学院

- **Background:**

- In the acute respiratory distress syndrome (ARDS), the extent of fibroproliferative activity on chest HRCT has been reported to correlate with poorer short-term outcomes and pulmonary-associated quality of life.
- However, clinical factors associated with HRCT fibroproliferation are incompletely characterized. 纤维增生相关的临床因素并不完全清楚
- We questioned if lung compliance assessed at the bedside would be associated with fibroproliferation on HRCT obtained during the resolution phase of ARDS. 假设ARDS患者恢复阶段床旁肺顺应性的评估与纤维增生具有相关性

- **Methods:**

- We utilized data from a published randomized, controlled clinical trial in ARDS. All patients were cared for using a low tidal volume strategy.
- Demographic data and ventilator parameters were examined in association with radiologic scores from chest HRCTs obtained 14 days after diagnosis. 人口统计学数据和通气参数与诊断14天后HRCT的影像学分数一起进行检验

- **Results:**
- Data from 82 ARDS patients were analyzed.
- Average static respiratory compliance over the first 14 days after diagnosis was inversely associated with chest HRCT reticulation ($\rho=-0.46$); 诊断后前14天的平均静息肺顺应性与胸部HRCT网状改变呈负相关
- this relationship persisted in multivariable analysis including APACHE II scores, initial $\text{PaO}_2/\text{FiO}_2$, pneumonia diagnosis and ventilator days. 多变量分析中APACHE II评分, 初期氧合指数, 肺炎诊断及机械通气天数与胸部HRCT网状改变也呈负相关
- Average static respiratory compliance was also lower among patients with bronchiectasis at day 14. 第14天时支扩患者平均静息呼吸顺应性更低
- Initial static respiratory compliance obtained within the first day after ARDS diagnosis was correlated inversely with the presence of HRCT reticulation, and was lower among patients who demonstrated bronchiectasis on the day 14 HRCT. 诊断ARDS后第一天内获得的初期静息肺顺应性与之也呈负相关, 并且在第14天HRCT中证明有支扩的患者中更低

- **Conclusions:**

- In patients with ARDS, diminished lung compliance measured bedside was associated with radiologic fibroproliferation 14 days post diagnosis. 床旁检测到肺顺应性的降低与诊断14天后放射检查的纤维增生相关
- Establishing factors that predispose to development of excessive fibroproliferation with subsequent confirmation by chest HRCT represents a promising strategy to identify ARDS patients at risk for poorer clinical outcomes. 这些因素可能可以作为一个诊断ARDS患者不良临床结局风险的可行方案。

B-Mode ultrasound assessment of diaphragm structure and function in patients with COPD

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- **Background:**
- Electromyographic evaluation of diaphragmatic neuromuscular disease in COPD patients is technically difficult and potentially high risk.
- Defining standard values for diaphragm thickness and thickening ratio using B mode ultrasound may provide a simpler, safer means of evaluating these patients. 采用B超界定膈肌的厚度与增厚率的标准值可能更简单安全
- **Methods:**
- Fifty patients with a diagnosis of COPD and $FEV_1 < 70\%$ underwent B mode ultrasound. Three images were captured both at end-expiration (T^{MIN}) and at maximal inspiration (T^{MAX}). 呼气末和最大吸气时分别采集3个图像
- The thickening ratio was calculated as (T^{MAX} / T^{MIN}) and each set of values were averaged. Findings were compared to a database of 150 healthy controls. 计算 T^{MAX} / T^{MIN} 为其增厚率，平均值与健康人比

- **Results:**

- There was no significant difference in diaphragm thickness or thickening ratio between sides within groups (controls or COPD) or between groups, with the exception of the subgroup with severe air trapping (residual volume > 200%), in which the only difference was that the thickening ratio was higher on the left (p=.0045).严重气体储留（残气量> 200%）的亚组患者左侧膈肌的增厚率更高，而组间和组内两侧膈肌的厚度与增厚率无明显差异

- **Conclusions:**

- In patients with COPD presenting for evaluation of co-existing neuromuscular respiratory weakness, the same values established for healthy controls serve as the baseline for comparison. This knowledge expands the role of ultrasound in evaluating neuromuscular disease in COPD patients.
- 在COPD患者评估并存神经肌肉呼吸无力时可以用健康对照组所建立的值作为对比的基线。扩大了超声在评估COPD患者神经肌肉疾病的角色

CT Scan-Measured Pulmonary Artery to Aorta Ratio and Echocardiography for Detecting Pulmonary Hypertension in Severe COPD

Anand S. Iyer, MD, J. Michael Wells, MD, Sonia Vishin, MD, FCCP, Surya P. Bhatt, MD,

- **Background:**
- COPD is associated with significant morbidity primarily driven by acute exacerbations. Relative pulmonary artery (PA) enlargement, defined as a PA to ascending aorta (A) diameter ratio greater than one ($PA:A > 1$) identifies patients at increased risk for exacerbations. However, little is known about the correlation between PA:A, echocardiography, and invasive hemodynamics in COPD.
- COPD的急性加重与肺动脉压力密切相关，但是PA:A比例与超声检查结果哪一个更能准确的反映侵入性血流动力学检查出来的肺动脉压力值尚不清楚。

- **Methods:**

- A retrospective observational study of patients with severe COPD being evaluated for lung transplantation at a single center between 2007 and 2011 was conducted. 重症COPD患者行肺移植评估的单中心回顾性的观察性研究
- Clinical characteristics, CT scans, echocardiograms, and right-sided heart catheterizations were reviewed.
- The PA diameter at the bifurcation and A diameter from the same CT image were measured. 测量肺动脉分叉处直径和主动脉直径
- Linear and logistic regression were used to examine the relationships between PA:A ratio by CT scan and PA systolic pressure (PASP) by echocardiogram with invasive hemodynamics. 检测CT平扫的肺动脉/主动脉比例和心脏彩超肺动脉收缩压与侵入性血流动力学检查之间的关系
- Receiver operating characteristic analysis assessed the usefulness of the PA:A ratio and PASP in predicting resting pulmonary hypertension (PH) (mean pulmonary artery pressure [mPAP] > 25 mm Hg). 评估PA:A比例和肺动脉收缩压在预测静息肺高压方面的效用

- **Results:**

- Sixty patients with a mean predicted FEV₁ of 27% ± 12% were evaluated.
- CT scan-measured PA:A correlated linearly with mPAP after adjustment for multiple covariates ($r = 0.30$, $P = .03$), a finding not observed with PASP. CT平扫测得的PA:A比值与平均肺动脉压力呈线性相关，但超声结果无此相关性
- In a multivariate logistic model, mPAP was independently associated with PA:A > 1 (OR, 1.44). 平均肺动脉压独立与PA:A > 1相关(OR, 1.44)
- PA:A > 1 was 73% sensitive and 84% specific for identifying patients with resting PH (area under the curve, 0.83), whereas PASP was not useful. PA:A > 1的敏感度73%，特异度84%，而超声结果并无用处

- **Conclusions:**

- A PA:A ratio > 1 on CT scan outperforms echocardiography for diagnosing resting PH in patients with severe COPD.
- CT平扫PA:A比例 > 1在诊断患有严重COPD患者的静息肺高压方面优于心脏超声

Title Skimming

1、 ABO Blood Type A Is Associated With Increased Risk of ARDS in Whites Following Both Major Trauma and Severe Sepsis

A型血与白种人严重创伤及脓毒症后ARDS高风险相关

2、 The association of weight with the detection of airflow obstruction and inhaled treatment among patients with a clinical diagnosis of COPD

体重与气流阻塞和吸入治疗在临床诊断COPD的患者中的关系

3、 Applying new strategies for the national adaptation, updating and dissemination of trustworthy guidelines: Results from the Norwegian adaptation of the American College of Chest Physicians Evidence-based Guidelines on Antithrombotic Therapy and the Prevention of Thrombosis, 9th Edition

循证临床实践指南——抗血栓治疗和血栓形成的预防，第9版

4. Serum Free Fatty Acid Biomarkers of Lung Cancer

肺癌的血清游离脂肪酸生物标志物

5. Exertional hypoxemia in stable COPD is common and predicted by circulating proadrenomedullin

循环肾上腺髓质素前体可预知稳定COPD患者中常见的活动性低氧

6. Adenovirus-specific immunoglobulin G maturation as a surrogate marker in acute exacerbations of COPD

急性加重的COPD患者中腺病毒特异性的成熟IgG可作为替代标记物

7. Relationship of the SAME-TT₂R₂ score to poor quality anticoagulation, stroke, clinically relevant bleeding and mortality in patients with atrial fibrillation . SAME-TT₂R₂评分系统

与房颤患者抗凝效果差、中风、临床相关出血和死亡的关系

8、 Pulmonary function and survival in idiopathic versus secondary usual interstitial pneumonia

原发及继发普通间质性肺炎的肺功能与生存情况

9、 QUALITY INDICATORS FOR THE EVALUATION OF PATIENTS WITH LUNG CANCER

肺癌患者的评估质量指标

10、 Distribution of T-Cell Subsets in BAL Fluid of Patients With Mild to Moderate COPD Depends on Current Smoking Status and Not Airway Obstruction

在轻到中度COPD患者支气管肺泡灌洗液中T细胞亚群的分布取决于患者当前的吸烟状态而非气道阻塞程度

11、 Effect of CPAP on Blood Pressure in Patients With OSA/Hypopnea:A Systematic Review and Meta-analysis

持续正压通气对阻塞性睡眠呼吸暂停低通气综合征患者血压的影响

12、 Budesonide Nebulization Added to Systemic Prednisolone in the Treatment of Acute Asthma in Children:A Double-Blind, Randomized, Controlled Trial. 在系统应用氢化可的松治疗儿童急性哮喘中加入布地奈德雾化治疗的双盲随机对照试验

13、 Feasibility and Safety of Bronchoscopic Transparenchymal Nodule Access in Canines:A New Real-Time Image-Guided Approach to Lung Lesions

支气管镜下对犬类动物经肺实质小结节穿刺的可行性与安全性

14、 Facility-Level Analysis of PET Scanning for Staging Among US Veterans With Non-small Cell Lung Cancer

对患非小细胞肺癌的美国老兵用PET平扫分期的设备层面的分析

15、 A Clinical Score (RAPID) to Identify Those at Risk for Poor Outcome at Presentation in Patients With Pleural Infection

辨别胸膜感染患者不良结局风险的临床快速评分方法

Thank you!