CHEST   JOURNAL

2013级住院医

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2015-11-26

Thyroid Disease Is Prevalent and Predicts Survival in Patients With Idiopathic Pulmonary   Fibrosis

甲状腺疾病普遍流行并能预测特发性肺纤维化患者的生存率

BACKGROUND：

- A significant minority of patients with idiopathic pulmonary fibrosis (IPF) display features of autoimmunity without meeting the criteria for overt connective tissue disease. A link between IPF and other immune-mediated processes, such as hypothyroidism (HT), has not been reported. In this investigation, we aimed to determine whether HT is associated with IPF and if outcomes differ between patients with IPF with and without HT.

- 相当一部分IPF并没有结蹄组织疾病的典型表现，IPF和其他免疫介导的疾病如甲减之间的联系尚未被报道。这项调查旨在明确甲减与IPF是否联系及合并甲减的IPF患者与无甲减的IPF患者的不同结局

METHODS:

- A retrospective case-control analysis was conducted. Of 311 patients referred to the University of Chicago Interstitial Lung Disease Center with an initial diagnosis of IPF, 196 met the inclusion criteria and were included in the final analysis. Each case was matched 1:1 by age, sex, and race to a control subject with COPD.

  这是一项回顾性病例对照分析，选取了芝加哥大学间质性肺疾病中心的311名初次诊断为IPF的患者，其中196纳入了研究，每种情况下按1:1匹配了年龄、性别、和种族控制主体与慢性阻塞性肺疾病对照。

RESULTS:

HT was identified in 16.8% of cases and 7.1% of control subjects (OR, 2.7; 95% CI,1.31-5.54; P 5 .01). Among patients with IPF, HT was associated with reduced survival time(P , .001) and was found to be an independent predictor of mortality in multivariable Coxregression analysis (hazard ratio, 2.12; 95CI, 1.31-3.43; P 5 .002). A secondary analysis of two IPF clinical trial datasets supports these findings.

实验组合并甲减的为16.8%，对照组为7.1%。甲减与缩短IPF患者生存时间有联系，还发现甲减能作为预测患者死亡率的独立指标，两个IPF的二次分析临床试验数据集支持这些发现

CONCLUSIONS:

HT is common among patients with IPF, with a higher prevalence than in those with COPD and the general population. The presence of HT also predicts mortality in IPF, a finding that may improve future prognostication models. More research is needed to determine the biologic link between IPF and HT and how the presence of thyroid disease may influence disease progression.

HT在 IPF患者中是很常见的,其发病率高于COPD和一般人群。HT的存在也能预测死亡率,这一发现可能会改善未来的预测模型。但还需要更多的研究来确定IPF和HT之间的联系及甲状腺疾病的存在如何影响疾病进展。
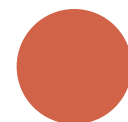
Prognostication of Mortality in Critically Ill Patients With Severe Infections

ICU严重感染患者死亡率的预测

BACKGROUND:

- The purpose of this study was to confirm the prognostic value of pancreatic stone protein (PSP) in patients with severe infections requiring ICU management

- develop and validate a model to enhance mortality prediction by combining severity scores with biomarkers.

  目的一是证实胰石蛋白在重症感染患者预后价值

二是开发和验证一个模型通过结合严重程度评分和生物标记来提高死亡率的预测

METHODS:

- We enrolled prospectively patients with severe sepsis or septic shock in mixed tertiary ICUs in Switzerland (derivation cohort) and Brazil (validation cohort). Severity scores (APACHE II or Simplified Acute Physiology Score II) were combined with biomarkers obtained at the time of diagnosis of sepsis, including CRP、PCT and PSP. Logistic regression models with the lowest prediction errors were selected to predict in-hospital mortality.

- 我们选择综合ICU的可能为重症感染或感染性休克的患者。瑞士的患者患者为推导组，巴西的患者为验证组。严重评分结合ＣＲＰ、ＰＣＴ、ＰＳＰ等生物标志物。逻辑回归模型降低预测错误来预测死亡率。

RESULTS:

- Mortality rates of patients with septic shock enrolled in the derivation cohort (103 out of 158) and the validation cohort (53 out of 91) were 37% and 57%, respectively. APACHE II and PSP were significantly higher in dying patients. In the derivation cohort, the models combining either APACHE II, PCT, and PSP ([AUC], 0.721; 95% CI, 0.632-0.812) or SAPS II, PCT, and PSP (AUC, 0.710; 95% CI, 0.617-0.802) performed better than each individual biomarker (AUC PCT, 0.534; 95% CI, 0.433-0.636; AUC PSP, 0.665; 95% CI, 0.572-0.758) or severity score (AUC APACHE II, 0.638; 95% CI, 0.543-0.733; AUC SAPS II, 0.598; 95% CI, 0.499-0.698). These models were externally confirmed in the independent validation cohort.

- 脓毒性休克患者推导队列和验证组的死亡率分别为37%和57%, APACHE II和PSP在垂死病人显著提高。 推导队列,模型结合APACHE II,PCT,和PSP表现好于独立生物标志物或严重程度评分。这些模式在独立的验证队列得到验证

CONCLUSIONS:

- We confirmed the prognostic value of PSP in patients with severe sepsis and septic shock requiring ICU management. A model combining severity scores with PCT and PSP improves mortality prediction in these patients.

我们证实了PSP有预后价值严重脓毒症和脓毒性休克患者。结合严重程度得分和PCT、PSP能改善这些患者的死亡率的预测。

Acid and Weakly Acidic Gastroesophageal Reflux and Pepsin Isoforms (A and C) in Tracheal Secretions of Critically Ill Children

- ICU病房的患儿气道分泌物是酸性及弱酸性的胃食管返流物和胃蛋白酶亚型A和C型）

BACKGROUND:

o   Gastroesophageal reflux (GER) and pulmonary aspiration are frequent in patients in the ICU. The presence of pepsin in airways seems to be the link between them. However, pepsin isoforms A (gastric specific) and C (pneumocyte potentially derived) need to be distinguished. This study aimed to evaluate GER patterns and to determine the presence of pepsin A and C in tracheal secretions of critically ill children receiving mechanical ventilation.

o 在ICU胃食管反流和肺误吸是频繁的，气道内胃蛋白酶存在是两者之间的联系，然而，胃蛋白酶A型（胃特殊部位产生）、C型（可能由肺特殊细胞产生）需要鉴别，这项研究旨在评价胃食管返流模式和确定在监护室里接受呼吸机支持呼吸的患儿胃蛋白酶A/C存在。

METHODS:

- All patients underwent combined multichannel intraluminal impedance-pH (MII-pH) monitoring. Tracheal secretion samples were collected to determine the presence of pepsin. Pepsin A and C were evaluated by Western blot. MII-pH parameters analyzed were number of total GER episodes (NGER); acid, weakly acidic, and weakly alkaline GER episodes; and proximal and distal GER episodes.

所有患者都在接受监测气道分泌物。被收集的样本确定了胃蛋白酶的存在。胃蛋白酶a/c检测通过蛋白印记法，收集分泌物中有酸性、弱酸性、弱碱性的反流物，近端远端的反流物

RESULTS:

- Thirty-four patients (median age, 4 months; range, 1-174 months) were included. MII-pH monitoring detected 2,172 GER episodes (77.0% were weakly acidic; 71.7% were proximal). The median NGER episodes per patient was 59.5 (25th-75th percentile, 20.3-85.3). Weakly acidic GER episodes per patient were significantly more frequent than acid GER episodes per patient (median [25th-75th percentile], 43.5 [20.3-68.3] vs 1.0 [0-13.8], respectively; P < .001). Only three patients had an altered acid reflux index (44.9%, 12.7%, and 13.6%) while not taking antacid drugs. Pepsin A was found in 100% of samples and pepsin C in 76.5%. 研究了34名患儿。监测了2172次返流，77%是弱酸性，71.7%是中性。弱酸性的返流物更有意义。只有3例没有使用抑酸药的患者返流物是酸性的。在收集的返流物中全部含有蛋白酶A，77%含有蛋白酶C型）

CONCLUSIONS:

- The majority of GER episodes of children in the ICU were proximal and weakly acidic. All patients had aspiration of gastric contents as detected by pepsin A in tracheal fluid. A specific pepsin assay should be performed to establish gastropulmonary aspiration because pepsin C was found in > 70% of samples.

- 结论:在ICU患儿大多数胃食管返流弱酸性和中性，所有误吸患儿监测出胃蛋白酶A。一个特定的胃蛋白酶实验应当被建立确定胃肺误吸的关系，因为70%的样本中监测出胃蛋白酶C

Critical Care Ultrasonography Differentiates ARDS, Pulmonary Edema, and Other Causes in the Early Course of Acute Hypoxemic Respiratory Failure　Focused Cardiac and Thoracic Ultrasonography

- 监护室超声鉴别ARDS、肺水肿、其它原因引起早期低氧性呼吸衰竭

BACKGROUND:

- Pathogenic causes of acute hypoxemic respiratory failure (AHRF) can be difficult to identify at early clinical presentation. We evaluated the diagnostic utility of combined cardiac and thoracic critical care ultrasonography (CCUS)

- .早期低氧性呼吸衰竭的病因在临床早期很难被鉴定，我们评估结合心脏和胸部超声。

METHODS:

- Adult patients in the ICU were prospectively enrolled from January through September 2010 with a PaO_2/FIO_2 ratio < 300 on arterial blood gas (ABG) analysis within 6 h of a new hypoxemic event or the ICU admission. Focused cardiac and thoracic CCUS was conducted within 6 h of ABG testing. Causes of AHRF were categorized into cardiogenic pulmonary edema (CPE), ARDS, and miscellaneous causes after reviewing the hospitalization course in electronic medical records。2010年1月至9月入ICU的6小时内氧合指数＜300的患者。关注心脏及胸部超声及6小时内血气监测，急性低氧呼吸衰竭被分为心源性肺水肿，ARDS、和混在多种医源性因素。

RESULTS:

- One hundred thirty-four patients were enrolled (median PaO_2/FIO_2 ratio, 191; interquartile range, 122-253). Fifty-nine patients (44%) received a diagnosis of CPE; 42 (31%), ARDS; and 33 (25%), miscellaneous cause. Analysis of CCUS findings showed that a low B-line ratio (proportion of chest zones with positive B-lines relative to all zones) was predictive of miscellaneous cause vs CPE or ARDS (receiver operating characteristic area under the curve [AUC], 0.82; 95% CI, 0.75-0.88). For further differentiation of CPE from ARDS, left-sided pleural effusion (> 20 mm), moderately or severely decreased left ventricular function, and a large inferior vena cava minimal diameter (> 23 mm) were predictive of CPE (AUC, 0.79; 95% CI, 0.70-0.87).

- 一百三十四名患者(平均氧合指数,191;)。 59例患者(44%)被诊断为CPE;42(31%)是ARDS;和33例(25%)是多种原因。 CCUS分析结果依据显示B线的比例预测多方面导致、CPE或ARDS,为进一步鉴别ARDS、CPE,如果左侧胸腔积液(> 20 mm),中度或严重降低左心室功能,和一个下腔静脉(> 23毫米)被认为是CPE(AUC,0.79;95%置信区间,0.79 - 0.70)。)

CONCLUSIONS:

- Combined cardiac and thoracic CCUS assists in early bedside differential diagnosis of ARDS, CPE, and other causes of AHRF.

- 结合床旁心脏和胸超声可以协助鉴别诊断ARDS、CPE、或其它原因引起的AHRF

Outcomes in Critically Ill Patients With Systemic Rheumatic Diseas
A Multicenter Study

- 系统性风湿病危重患者的结局

BACKGROUND

- Patients with systemic rheumatic diseases (SRDs) may require ICU management for SRD exacerbation or treatment-related infections or toxicities.

- 系统性风湿性疾病患者当原发疾病恶化或治疗相关的感染或毒性可能需收入ＩＣＵ

METHODS:

- This was an observational study at 10 university-affiliated ICUs in France. Consecutive patients with SRDs were included. Determinants of ICU mortality were identified through multivariable logistic analysis.

- 这是一个观察性研究，观察法国10个大学附属ＩＣＵ系统性风湿疾病患者。

- 通过多变量逻辑分析法来分析死亡率。

RESULTS:

- Three hundred sixty-three patients (65.3% women; median age, 59 years）accounted for 381 admissions. Connective tissue disease (primarily systemic lupus erythematosus) accounted for 66.1% of SRDs and systemic vasculitides for 26.2%。 SRDs were newly diagnosed in 43 cases (11.3%). Direct admission to the ICU occurred in 143 cases (37.9%). Reasons for ICU admissions were infection (39.9%), SRD exacerbation (34.4%), toxicity (5.8%), or miscellaneous (19.9%). Respiratory involvement was the leading cause of admission (56.8%), followed by shock (41.5%) and acute kidney injury (42.2%). Median Sequential Organ Failure Assessment (SOFA) score on day 1 was 5 (3-8). Mechanical ventilation was required in 57% of cases, vasopressors in 33.9%, and renal replacement therapy in 28.1%. ICU mortality rate was 21.0% (80 deaths). Factors associated with ICU mortality were shock (OR, 3.77; 95% CI, 1.93-7.36), SOFA score at day 1 (OR, 1.19; 95% CI, 1.10-1.30), and direct admission (OR, 0.52; 95% CI, 0.28-0.97). Neither comorbidities nor SRD characteristics were associated with survival.

- 共纳入363患者(65.3%女性,平均年龄59岁）。
- 其中结缔组织疾病(主要是系统性红斑狼疮)占66.1%，系统性血管炎 26.2%，SRD新确诊的43例(11.3%)。直接进入加护病房发生143例(37.9%)。进入ICU的原因是感染(39.9%)、病情恶化(34.4%),中毒(5.8%)、或综合因素(19.9%)。以呼吸道为主要原因(56.8%),其次是休克(41.5%)和急性肾损伤(42.2%)。Sofa评分第一天 1是5(3 - 8)。需要机械通气有57%的情况，有33.9%升压,肾脏替代治疗的28.1%。ICU死亡率是21.0%(80人死亡)。
- 与ICU死亡率相关的因素是休克和第一天的sofa评分和直接收入ICU(优势比,0.52;95%置信区间,0.28 - -0.97)。

并不是合并症及SRD特征表现与生存率相关。

CONCLUSIONS:

- In patients with SRDs, critical care management is mostly needed only in patients with a previously known SRD; however, diagnosis can be made in the ICU for 12% of patients. Infection and SRD exacerbation account for more than two-thirds of these situations, both targeting chiefly the lungs. Direct admission to the ICU may improve outcomes.

- 系统性风湿性患者，ICU治疗主要是先前已知的系统性风湿性患者；然而,在ICU可以被诊断的病人占12%，感染和恶化占三分之二以上,主要是肺。直接进入ICU可能改善的结果。

Response to Fluid Boluses in the Fluid and Catheter Treatment Trial

BACKGROUND

- Recent emphasis has been placed on methods to predict fluid responsiveness, but the usefulness of using fluid boluses to increase cardiac index in critically ill patients with ineffective circulation or oliguria remains unclear.

- 最近强调预测液体反应性,但使用液体丸增加心脏指数在危重患者无效循环或少尿时的作用仍不清楚。

METHODS:

- This retrospective analysis investigated hemodynamic responses of critically ill patients in the ARDS Network Fluid and Catheter Treatment Trial (FACTT) who were given protocol-based fluid boluses. Fluid responsiveness was defined as $\geq 15\%$ increase in cardiac index after a 15 mL/kg fluid bolus.

- 回顾性分析研究危重病人的血流动力学反应ARDS网络流体和导管治疗试验(FACTT)给出了协议为基础的液体丸。在给予15毫升/公斤液体后，心脏指数增加≥15％被认为有反应性

RESULTS:

- A convenience sample of 127 critically ill patients enrolled in FACTT was analyzed for physiologic responses to 569 protocolized crystalloid or albumin boluses given for shock, low urine output (UOP), or low pulmonary artery occlusion pressure (PAOP). There were significant increases in mean central venous pressure (9.9 ± 4.5 to 11.1 ± 4.8 mm Hg, $P <$ .0001) and mean PAOP (11.6 ± 3.6 to 13.3 ± 4.3 mm Hg, $P <$ .0001) following fluid boluses. However, there were no significant changes in UOP, and there were clinically small changes in heart rate, mean arterial pressure, and cardiac index. Only 23% of fluid boluses led to a $\geq 15\%$ change in cardiac index. There was no significant difference in the frequency of fluid responsiveness between boluses given for shock or oliguria vs boluses given only for low PAOP (24.0% vs 21.8%, $P =$ .59). There were no significant differences in 90-day survival, need for hemodialysis, or return to unassisted breathing between patients defined as fluid responders and fluid

- 一个由127名危重患者参加FACTT为样本，休克、低尿量、低肺动脉楔压的患者予以补晶体或白蛋白。补液后能增加CVP、PAOP。然而不能改善低尿量；心率、心脏指数MAP只有很小变化。补液后只有23%有反应性。在休克或少尿与低PAOP频繁补液后没有显著差异。90天生存率、需要血液透析、需要呼吸支持没有显著差异在有反应和无反应性患者。

CONCLUSIONS:

- In this cohort of critically ill patients with ARDS who were previously resuscitated, the rate of fluid responsiveness was low, and fluid boluses only led to small hemodynamic changes.

- 在这群病危已行液体复苏的ARDS患者，液体的反应性很低,液体丸只导致小的血流动力学变化