读书报告

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➢ Isotonic vs Hypotonic Intravenous Fluids for Hospitalized Children

Compared with hypotonic fluid,isotonic fluids associated with a lower incidence of hyponatremia, without evidence of an increase in adverse outcomes.

➢ Psychotherapy for Military-Related PTSD -A Review of Randomized Clinical Trials

In military and veteran populations,trials of the first-line trauma-focused interventions CPT and prolonged exposure have shown clinically meaningful improvements for many patients with PTSD.

➢ Time to Epinephrine and Survival After Pediatric In-Hospital Cardiac Arrest

Among children with in-hospital cardiac arrest with an initial nonshockable rhythm who received epinephrine, delay in administration of epinephrine was associated with decreased chance of survival to hospital discharge, ROSC, 24-hour survival, and survival to hospital discharge with a favorable neurological outcome.

➢ Long-term vs Short-term Therapy With Vitamin K Antagonists for Symptomatic Venous Thromboembolism

Long-termtreatmentwithVKAsisassociatedwithareducedriskforrecurrent VTE and an increased risk for major bleeding compared with short-term treatment in patients with VTE, but is not associated with differences in mortality.

➢ Trajectory of Cognitive Decline After Incident Stroke

Incident stroke was associated with an acute decline in cognitive function and also accelerated and persistent cognitive decline over 6 years.

➢ Six Months vs Extended Oral Anticoagulation After a First Episode of Pulmonary Embolism The PADIS-PE Randomized Clinical Trial

Among patients with a first episode of unprovoked pulmonary embolism who received 6 months of anticoagulant treatment, an additional
18 months of treatment with warfarin reduced the composite outcome of recurrent venous thrombosis and major bleeding compared with placebo. However, benefit was not maintained after discontinuation of anticoagulation therapy.

➢ Association of Bystander and First-Responder Intervention With Survival After Out-of-Hospital Cardiac Arrest in North Carolina, 2010-2013

Following a statewide educational intervention on rescusitation training, the proportion of patients receiving bystander-initiated CPR and defibrillation by first responders increased and was associated with greater likelihood of survival. Bystander-initiated CPR was associated with greater likelihood of survival with favorable neurological outcome.

- **Effect of a 24-Month Physical Activity Intervention vs Health Education on Cognitive Outcomes in Sedentary Older Adults The LIFE Randomized Trial**

Among sedentary older adults,a24-month moderate-intensity physical activity program compared with a health education program did not result in improvements in global or domain-specific cognitive function.

- **Association of Cardiometabolic Multimorbidity With Mortality**

Mortality associated with a history of diabetes,stroke,orMI was similar for each condition. Because any combination of these conditions was associated with multiplicative mortality risk, life expectancy was substantially lower in people with multimorbidity.

- **Association Between Intermittent Hypoxemia or Bradycardia and Late Death or Disability in Extremely Preterm Infants**

Amongextremelypreterminfantswhosurvivedto36weeks' postmenstrual age, prolonged hypoxemic episodes during the first 2 to 3 months after birth were associated with adverse 18-month outcomes. If confirmed in future studies, further research on the prevention of such episodes is needed.

- ## Effect of Patiromer on Serum Potassium Level in Patients With Hyperkalemia and Diabetic Kidney Disease The AMETHYST-DN Randomized Clinical Trial

Among patients with hyperkalemia and diabetic kidney disease, patiromer starting doses of 4.2 to 16.8 g twice daily resulted in statistically significant decreases in serum potassium level after 4 weeks of treatment, lasting through 52 weeks.

- ## Initial Use of Ambrisentan plus Tadalafil in Pulmonary Arterial Hypertension

Among participants with pulmonary arterial hypertension who had not received previous treatment, initial combination therapy with ambrisentan and tadalafil resulted in a significantly lower risk of clinical-failure events than the risk with ambrisentan or tadalafil monotherapy.

- ## Effect of Omega-3 Fatty Acids, Lutein/Zeaxanthin, or Other Nutrient Supplementation on Cognitive Function The AREDS2 Randomized Clinical Trial

Among older persons with AMD,oral supplementation with LCPUFAs or lutein/zeaxanthin had no statistically significant effect on cognitive function.

Association Between Blood Pressure Control and Risk of Recurrent Intracerebral Hemorrhage

Alessandro Biffi, MD; Christopher D. Anderson, MD, MMSc, et al

OBJECTIVE To investigate the association between blood pressure(BP) after index ICH and risk of recurrent ICH.

DESIGN,SETTING,AND PARTICIPANTS Single-site,tertiary care referral center observational study of 1145 of 2197 consecutive patients with ICH presenting from July 1994 to December 2013. A total of 1145 patients with ICH survived at least 90 days and were followed up through December 2013 (median follow-up of 36.8 months [minimum, 9.8 months]).

EXPOSURES Blood pressure measurements at3,6,9,and12months,and every 6months thereafter, obtained from medical personnel (inpatient hospital or outpatient clinic medical or nursing staff) or via patient self-report. Exposure was characterized in 3 ways: (1) recorded systolic and diastolic measurements; (2) classification as adequate or inadequate BP control based on American Heart Association/American Stroke Association recommendations; and (3) stage of hypertension based on Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure 7 criteria.

MAIN OUTCOMES AND MEASURES Recurrent ICH and its location within the brain (lobar vs nonlobar).

RESULTS There were 102 recurrent ICH events among 505 survivors of lobar ICH and 44 recurrent ICH events among 640 survivors of nonlobar ICH. During follow-up adequate BP control was achieved on at least 1 measurement by 625 patients (54.6% of total [range, 49.2%-58.7%]) and consistently (ie, at all available time points) by 495 patients (43.2% of total [range, 34.5%-51.0%]). The event rate for lobar ICH was 84 per 1000 person-years among patients with inadequate BP control compared with 49 per 1000 person-years among patients with adequate BP control. For nonlobar ICH the event rate was 52 per 1000 person-years with inadequate BP control compared with 27 per 1000 person-years for patients with adequate BP control. In analyses modeling BP control as a time-varying variable, inadequate BP control was associated with higher risk of recurrence of both lobar ICH (hazard ratio [HR], 3.53 [95% CI, 1.65-7.54]) and nonlobar ICH (HR, 4.23 [95% CI, 1.02-17.52]). Systolic BP during follow-up was associated with increased risk of both lobar ICH recurrence (HR, 1.33 per 10-mm Hg increase [95% CI, 1.02-1.76]) and nonlobar ICH recurrence (HR, 1.54 [95% CI, 1.03-2.30]). Diastolic BP was associated with increased risk of nonlobar ICH recurrence(HR, 1.21 per 10-mm Hg increase [95% CI, 1.01-1.47]) but not with lobar ICH recurrence (HR, 1.36 [95% CI, 0.90-2.10]).

CONCLUSIONS AND RELEVANCE In this observational single-center cohort study of ICH survivors, reported BP measurements suggesting inadequate BP control during follow-up were associated with higher risk of both lobar and nonlobar ICH recurrence. These data suggest that randomized clinical trials are needed to address the benefits and risks of stricter BP control in ICH survivors.

Restrictive versus liberal blood transfusion for acute upper gastrointestinal bleeding (TRIGGER): a pragmatic, open-label, cluster randomised feasibility trial

Vipul Jairath, Brennan C Kahan, et al

Background Transfusion thresholds for acute upper gastrointestinal bleeding are controversial. So far, only three small, underpowered studies and one single-centre trial have been done. Findings from the single-centre trial showed reduced mortality with restrictive red blood cell (RBC) transfusion. We aimed to assess whether a multicentre, cluster randomised trial is a feasible method to substantiate or refute this finding.

Methods In this pragmatic, open-label, cluster randomised feasibility trial, done in six university hospitals in the UK, we enrolled all patients aged 18 years or older with new presentations of acute upper gastrointestinal bleeding, irrespective of comorbidity, except for exsanguinating haemorrhage. We randomly assigned hospitals (1:1) with a computer-generated randomisation sequence (random permuted block size of 6, without stratification or matching) to either a restrictive (transfusion when haemoglobin concentration fell below 80 g/L) or liberal (transfusion when haemoglobin concentration fell below 100 g/L) RBC transfusion policy. Neither patients nor investigators were masked to treatment allocation. Feasibility outcomes were recruitment rate, protocol adherence, haemoglobin concentration, RBC exposure, selection bias, and information to guide design and economic evaluation of the phase 3 trial. Main exploratory clinical outcomes were further bleeding and mortality at day 28. We did analyses on all enrolled patients for whom an outcome was available.

Findings Between Sept 3, 2012, and March 1, 2013, we enrolled 936 patients across six hospitals (403 patients in three hospitals with a restrictive policy and 533 patients in three hospitals with a liberal policy). Recruitment rate was significantly higher for the liberal than for the restrictive policy (62% *vs* 55%; p=0·04). Despite some baseline imbalances, Rockall and Blatchford risk scores were identical between policies. Protocol adherence was 96% (SD 10) in the restrictive policy *vs* 83% (25) in the liberal policy (difference 14%; 95% CI 7–21; p=0·005). Mean last recorded haemoglobin concentration was 116 (SD 24) g/L for patients on the restrictive policy and 118 (20) g/L for those on the liberal policy (difference –2·0 [95% CI –12·0 to 7·0]; p=0·50). Fewer patients received RBCs on the restrictive policy than on the liberal policy (restrictive policy 133 [33%] *vs* liberal policy 247 [46%]; difference –12% [95% CI –35 to 11]; p=0·23), with fewer RBC units transfused (mean 1·2 [SD 2·1] *vs* 1·9 [2·8]; difference –0·7 [–1·6 to 0·3]; p=0·12), although these differences were not significant. We noted no significant difference in clinical outcomes.

Interpretation A cluster randomised design led to rapid recruitment, high protocol adherence, separation in degree of anaemia between groups, and non-significant reduction in RBC transfusion in the restrictive policy. A large cluster randomised trial to assess the effectiveness of transfusion strategies for acute upper gastrointestinal bleeding is both feasible and essential before clinical practice guidelines change to recommend restrictive transfusion for all patients with acute upper gastrointestinal bleeding.

Community-Acquired Pneumonia Requiring Hospitalization among U.S. Adults

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BACKGROUND

Community-acquired pneumonia is a leading infectious cause of hospitalization and death among U.S. adults. Incidence estimates of pneumonia confirmed radiographically and with the use of current laboratory diagnostic tests are needed.

METHODS

We conducted active population-based surveillance for community-acquired pneumonia requiring hospitalization among adults 18 years of age or older in five hospitals in Chicago and Nashville. Patients with recent hospitalization or severe immunosuppression were excluded. Blood, urine, and respiratory specimens were systematically collected for culture, serologic testing, antigen detection, and molecular diagnostic testing. Study radiologists independently reviewed chest radio- graphs. We calculated population-based incidence rates of community-acquired pneumonia requiring hospitalization according to age and pathogen.

RESULTS

From January 2010 through June 2012, we enrolled 2488 of 3634 eligible adults (68%). Among 2320 adults with radiographic evidence of pneumonia (93%), the median age of the patients was 57 years (interquartile range, 46 to 71); 498 patients (21%) required intensive care, and 52 (2%) died. Among 2259 patients who had radiographic evidence of pneumonia and specimens available for both bacterial and viral testing, a pathogen was detected in 853 (38%): one or more viruses in 530 (23%), bacteria in 247 (11%), bacterial and viral pathogens in 59 (3%), and a fungal or mycobacterial pathogen in 17 (1%). The most common pathogens were human rhinovirus (in 9% of patients), influenza virus (in 6%), and Streptococcus pneumoniae (in 5%). The annual incidence of pneumonia was 24.8 cases (95% confidence interval, 23.5 to 26.1) per 10,000 adults, with the highest rates among adults 65 to 79 years of age (63.0 cases per 10,000 adults) and those 80 years of age or older (164.3 cases per 10,000 adults). For each pathogen, the incidence increased with age.

CONCLUSIONS

The incidence of community-acquired pneumonia requiring hospitalization was highest among the oldest adults. Despite current diagnostic tests, no pathogen was detected in the majority of patients. Respiratory viruses were detected more frequently than bacteria.

THANK YOU!