The Association Between Doppler Measures of Cardiac Function and Outcomes in Patients With Left Ventricular Ejection Fraction $\leq$ 40% Undergoing Noncardiovascular Surgeries

Yang Shi
Rachel Pedersen
Matthew Rappelt
Robyn Shearer
Nasir Z. Sulemanjee
Dianne L. Zwicke
T. Edward Hastings
Omar M. Cheema
Vinay Thohan

Follow this and additional works at: https://aurora.org/jpcrr

Part of the Cardiology Commons, and the Cardiovascular Diseases Commons

Recommended Citation

Journal of Patient-Centered Research and Reviews (JPCRR) is a peer-reviewed scientific journal whose mission is to communicate clinical and bench research findings, with the goal of improving the quality of human health, the care of the individual patient, and the care of populations.
Demographic and traditional risk factors, as well as respiratory cultures, were predictive of carbapenem resistance. Such information may guide initial antibiotic treatment of *P. aeruginosa*. Fortunately, less than 1% of strains were resistant to all drugs tested. Further studies looking at change in outcome while incorporating these risk factors in determination of empiric coverage for patients should be performed.

**FIRST PLACE POSTER**

See page 245 for citation.

**SECOND PLACE POSTER (tie)**

The Association Between Doppler Measures of Cardiac Function and Outcomes in Patients With Left Ventricular Ejection Fraction ≤ 40% Undergoing Noncardiovascular Surgeries

Yang Shi, Rachel Pedersen, Matthew Rappelt, Robyn Shearer, Nasir Z. Sulemanjee, Dianne L. Zwicke, T. Edward Hastings, Omar M. Cheema, Vinay Thohan

Background: Preoperative risk assessments of individuals who undergo major noncardiac surgery have focused on ischemic heart disease. Information on how to assess the noncardiac surgical risks for patients with depressed cardiac function, as seen in heart failure, is sparse. Echocardiography is routinely performed in patients with depressed cardiac function and is an accepted standard cardiac assessment. Transthoracic echocardiography (TTE) provides strong independent prognostic implications in a wide range of cardiovascular conditions.

Purpose: To identify the echocardiographic parameters associated with outcomes among patients undergoing major noncardiac surgery.

Methods: A retrospective single-institution investigation identified 1,770 patients who underwent one or more major noncardiac procedures from Jan. 1, 2011, to June 30, 2014, and had at least one TTE performed within 90 days before surgery. Patients were stratified by presurgery left ventricular ejection fraction (LVEF) into LVEF ≤ 40% and LVEF > 40% groups. The cohort was followed through June 12, 2015, with the outcome focused on all-cause mortality. Continuous and categorical variables were compared by Student’s t-test and chi-squared test, respectively. Kaplan-Meier method was used to calculate mortality estimates postsurgery. Cox proportional hazards model was used for univariate and multivariable models.
Purpose: To determine the pregnancy intentions of postpartum women and the maternal characteristics, outcomes and costs of care associated with unintended pregnancies at a large urban hospital in Milwaukee, Wisconsin.

Methods: Postpartum women were surveyed prior to discharge. The 20-item survey included whether or not the woman had been trying to get pregnant and how she felt about the timing of her pregnancy. Electronic medical records were reviewed to determine maternal and neonatal outcomes, including antenatal, perinatal, postpartum comorbidities and complications. To determine the most important factors influencing the binary and multinomial responses of pregnancy intention, logistic and multinomial regression models were developed using stepwise variable selection procedures.

Results: A total of 338 women were asked to participate, resulting in 243 completed surveys (95 exclusions: 8 declines, 29 language barriers, 46 lost to follow-up, 12 other). Overall, 63% (142/227) of pregnancies occurred when “not trying.” Logistic and multinomial regression revealed anemia (P=0.004–0.007), anxiety (P=0.048) and income level (P=0.002–0.045) as the most significant predictors of unintended pregnancy. The odds of unintended pregnancy for women at the lowest two income levels were 12.05 (odds ratio: 2.82–51.39) and 3.83 (odds ratio: 1.314–11.142) times greater than those for women at the highest income level. Significant univariate associations existed between unintended pregnancy and age (P<0.001), race (P=0.025) and insurance (P=0.003).

Conclusion: The unintended pregnancy rate of our study population was greater than state and national levels. Maternal characteristics of income, anemia and anxiety were the most significant predictors of pregnancy intention, but unintended pregnancy also was highly associated with younger age, African-American race and Medicaid insurance. Unintended pregnancy effects included: fewer prenatal care visits, increased prevalence of intrauterine growth restriction and decreased likelihood of breastfeeding. While the relative use of contraception was significantly greater, the absolute use among women who had an unintended pregnancy is of great clinical concern.

Models for Predicting Incident Delirium in Hospitalized Older Adults: A Systematic Review

Sundeep Kalimisetty, Wajih Askar, Brenda Fay, Ariba Khan

Department of Geriatrics, Aurora Sinai Medical Center; Aurora Libraries, Aurora Health Care; Department of Geriatrics, Aurora UW Medical Group

Background: Delirium is common in hospitalized older adults, and 40% of cases may be preventable. Hospital Elder Life Program is an evidence-based program to reduce incidence of delirium. It has been successfully implemented in one hospital and will be implemented in four other hospitals. Identification of patients at highest risk of developing delirium using the electronic health record (EHR) may be an effective targeted strategy to reduce the incidence of delirium.

Purpose: To systematically review and summarize the medical literature regarding risk prediction models for delirium in older inpatients.

Methods: A medical librarian customized and conducted the search strategy for all published medical articles on delirium prediction models. Electronic databases sourced included Ovid MEDLINE, CINAHL, Cochrane Database of Systematic Reviews, EMBASE and PsycINFO. Controlled vocabulary terms specific to database as well as relevant keywords were