

RESEARCH SYMPOSIUM

**JUNE 14, 2012
7:00 – 10:00 a.m.**

Laros Auditorium

St. Luke's Hospital & Health Network

*Dental Residency
Emergency Medicine Residency
Family Medicine Residency
General Surgery Residency
Internal Medicine Residency
Obstetrics & Gynecology Residency
Orthopaedic Residency
Pharmacy Residency
Podiatry Residency*

*Osteopathic Internship
Transitional Year Internship*

*Cardiology Fellowship
Geriatric Medicine Fellowship
Hospice/Palliative Care Medicine Fellowship
Podiatric Dermatology Fellowship
Sports Medicine Fellowship
Trauma/Critical Care Fellowship
Urogynecology Fellowship*

Pastoral Care Residency

**Sponsored by
The Research Institute
Jill Stoltzfus, PhD, Director
stoltzj@slhn.org**

ORAL PRESENTATIONS

Note: Residents' and fellows' names are bolded.

- 1) Atrial Fibrillation During Dobutamine Stress Echocardiography: Patient Characteristics and Outcome Predictors
Yuba Acharya, MD; Junu Bhattarai, MD; Jamshid Shirani, MD
- 2) Value of Point of Care Echocardiography Using a Pocket-Sized Device in a Community Clinic
Lakshmi Chebrolu, MD; Yuba Acharya, MD; Jamshid Shirani, MD
- 3) Utility of Electrodiagnostic Studies in the Diagnosis of Ulnar Nerve Entrapment
Vamsi Kancherla, MD; Kristopher Matullo, MD
- 4) Ketamine vs. Etomidate for RSI in Traumatically Injured Patients: An Exploratory Study
Jesse Kropf, MD; Michael Grossman, MD; Philip Salen, MD; Michelle Genzlinger, DO; Christy Stehly, BS; Jill Stoltzfus, PhD; Aldo Carmona, MD
- 5) A Just Culture of Safety Driving Operative Vaginal Delivery Performance Improvement
Darlene Morrissey, DO; Joseph Merola, MD, MPH; Jill Stoltzfus, PhD
- 6) A Randomized Controlled Trial Comparing Ketamine to Etomidate for the Reduction of Dislocated Joints
Rex Villanueva, DO; Philip Salen, MD; Michelle Genzlinger, DO; Michael Grossman, MD; William Delong, MD; Jill Stoltzfus, PhD; Christy Stehly, BS
- 7) Determination of Futility in Trauma Care and its Impact on Mortality Rate in Geriatric Trauma
Corey Wright MD; Michael Grossman, MD; Christy Stehly, BS; Raffaele Marchigiani, MD; Jill Stoltzfus, PhD

ORAL PRESENTATION ABSTRACT

Atrial Fibrillation During Dobutamine Stress Echocardiography: Patient Characteristics and Outcome Predictors

Yuba Acharya, MD; Junu Bhattarai, MD; Jamshid Shirani, MD

Introduction/Background

Catecholamines play a significant role in the initiation and maintenance of atrial fibrillation (AF). We sought to characterize the clinical, electrocardiographic and echocardiographic features and predictors of AF during dobutamine stress echocardiography (DSE).

Methodology

The clinical, electrocardiographic and echocardiographic data of consecutive patients over a 6-year period who were in sinus rhythm and underwent DSE were retrospectively reviewed.

Results

Among 7,026 patients in sinus rhythm undergoing DSE, 73 (1%) developed AF (age 70 ± 10 years, 58% men). AF developed at 10 (n=2), 20 (n=5), 30 (n=28), 40 (n=20), and 50 (n=18) $\mu\text{g}/\text{kg}/\text{min}$ of dobutamine. Atropine was administered to 39 patients (53%). Patients with normal baseline echo (n=11) developed brief (<15 minutes) AF only at high doses of dobutamine (≥ 30 $\mu\text{g}/\text{kg}/\text{min}$) and did not require hospitalization or cardioversion. In contrast, among those with abnormal resting echo, AF developed at lower doses of dobutamine and was associated with inducible ischemia (23%), need for hospitalization (21%) or cardioversion (11%).

By univariate analysis, compared to 144 propensity matched controls without AF during DSE, those with AF were older (71 ± 13 vs. 67 ± 10 , $p=.02$) and were more likely to have history of prior AF (23% vs. 8%, $p=.002$); history of CAD (22% vs. 10%, $p=.04$); enlarged LV (27% vs. 9%, $p=.002$); reduced LVEF (27% vs. 12%, $p=.007$); LV wall motion abnormality (33% vs. 12%, $p<.0001$); enlarged aortic root (22% vs. 8%, $p=.009$); or dilated LA (52% vs. 30%, $p=.002$). Multivariate logistic regression analysis identified prior history of AF (adjusted odds ratio, AOR=3.7, 95% CI 1.5-9.0, $p=.005$), larger LVEDD (AOR=3.1, 95% CI 1.3-7.3, $p=.009$), and lower LVEF (AOR=.95, 95% CI .92-0.99, $p=.02$) as independent predictors of AF during DSE. At a mean duration of 3.5 years after the index stress test, those with AF during DSE were more likely to develop new onset coronary artery disease (22% vs. 10%, $p=.037$), CHF (19% vs. 4%, $p=.0003$) or die (27% vs. 6%, $p<.0001$).

Discussion and Conclusion

Dobutamine-induced AF in patients undergoing DSE occurs more commonly in those with prior history of AF and remodeled LV and is associated with unfavorable outcomes.

ORAL PRESENTATION ABSTRACT

Value of Point of Care Echocardiography Using a Pocket-Sized Device in a Community Clinic

Lakshmi Chebrolu, MD; Yuba Acharya, MD; Jamshid Shirani, MD

Introduction/Background

Nearly 20% of the population of the United States is uninsured. The uninsured do not seek regular preventive healthcare visits and may not have the needed resources to attend a “free” clinic, have specific tests (especially costly imaging) done, or return for follow up visits. This can lead to uncompensated care delivered by hospitals and physicians, with patients preferring emergency care that results in delayed institution of essential therapy at their limited outpatient visits. The aim of this study is to determine whether point-of-care echocardiography using a novel pocket-sized device (V Scan, GE Healthcare, Milwaukee, WI) would facilitate obtaining pertinent and unique information in addition to clinical and elaborate physical examination, and would allow initiation of therapeutic strategies without formal echocardiography.

Methodology

A total of 50 consecutive uninsured adults seen at the Southside Cardiology Clinic were included (age 56 ± 15 years, 54% men, body mass index 30 ± 6 kg/m², 68% hypertensive, 68% hyperlipidemic, 40% diabetic and 48% active smokers). Most patients were unemployed (54%), with 16% employed part time and 6% physically disabled. Clinical diagnostic and therapeutic decisions were formulated before and after echocardiography.

Results

Optimal or diagnostic quality images were obtainable in 92% of patients. Overall, in 76% of patients, the information obtained by point-of-care echocardiography obviated the need for a formal study. In 14% of patients, such information allowed therapeutic decision making at the same visit. Formal echocardiography was ordered in 20% of patients, out of which half did not show up for the study, while for the other half, the study was done at a mean of 13 days.

Discussion and Conclusions

The results of this study indicate that high quality point-of-care echocardiography is feasible in an outpatient cardiology clinic and can lead to 1) substantial cost savings; 2) obtaining information that is complementary to detailed cardiovascular examination; and 3) reduction of turn around time for therapeutic decisions that require echocardiographic assessment of left ventricular and valvular structure and function. This can potentially reduce the number of needed clinic visits and improve patient adherence to scheduled future follow-up visits.

ORAL PRESENTATION ABSTRACT

Utility of Electrodiagnostic Studies in the Diagnosis of Ulnar Nerve Entrapment

Vamsi Kancherla, MD; Kristopher Matullo, MD

Introduction/Background

Electrodiagnostic studies for the diagnosis of ulnar nerve entrapment (UNE) are often negative despite significant post-surgical improvement. In our study, we report on the following: 1) EMG/NCS results on patients who have had significant clinical improvement after surgical intervention; 2) utility of the contralateral, normal arm in the interpretation of EMG/NCS results and the diagnosis of UNE; and 3) sensitivity of EMG/NCS in the diagnosis of UNE. We hypothesize that contralateral arm EMG/NCS data provide higher sensitivity for the diagnosis of UNE.

Methodology

A total of 67 cases demonstrating significant improvement status-post surgery for UNE were retrospectively reviewed. Inclusion criteria included > 3 months follow-up and > 18 years of age. Patients were excluded if they had a history of polyneuropathy, chronic pain syndrome, previous upper extremity surgery, or any other neurologic problems. All patients were graded by established classification systems, including McGowen (6 Grade 1, 56 Grade 2, 5 Grade 3) and Dellon (7 mild, 44 moderate, 16 severe). Clinical findings recorded were strength (subjective and objective by dynamometer), Ulnar Subluxation, Tinel's and/or Elbow Flexion Test, sensory Deficits and/or paresthesias, pain, and Scratch Collapse Test. Postoperative Disability of the Arm, Shoulder, and Hand (DASH) scores were also obtained. EMG/NCS studies were reviewed for above elbow (AE) motor conduction velocity (MCV) and amplitude, below elbow (BE) MCV and amplitude, and F wave latency.

Results

There were 53 patients (average age 55.51, 34 male, 19 female) with 67 UNE cases treated surgically (44 endoscopic, 23 open) with an average follow up of 4.63 months. The average postoperative DASH was 7.25 at 8.21 months. AE MCV, BE MCV, Delta MCV, AE Amplitude, BE Amplitude, Delta Amplitude, and F wave latency for all cases were 50.57, 54.06, 10.3, 5.93, 6.44, .65, and 29.63, respectively; and for unilateral cases were 46.99, 52.66, 11.7, 5.5, 5.98, .81, and 28.93, respectively. When compared to the contralateral, asymptomatic arm, the aforementioned parameters were 82%, 93%, 380%, 76%, 81%, 432%, and 104%, respectively. Fifty-three percent of all cases, 73% of unilateral cases, and 79% of cases with contralateral, asymptomatic arm data had a positive electrodiagnostic study.

Discussion and Conclusion

Electrodiagnostic results from clinically improved patients conflict with the reference standards used by the American Association of Neuromuscular & Electrodiagnostic Medicine (AANEM) to diagnosis UNE. Furthermore, EMG/NCS sensitivity is higher with unilateral cases and when contralateral, asymptomatic arm data are available. In summary, the diagnosis of UNE remains primarily a clinical one that can be aided with electrodiagnostic studies.

ORAL PRESENTATION ABSTRACT

Ketamine vs. Etomidate for RSI in Traumatically Injured Patients: An Exploratory Study

*Jesse Kropf, MD; Michael Grossman, MD; Philip Salen, MD;
Michelle Genzlinger, DO; Christy Stehly, BS; Jill Stoltzfus, PhD, Aldo Carmona, MD*

Introduction/Background

Ketamine produces dissociative anesthesia characterized by analgesia and amnesia with an excellent safety profile appropriate for endotracheal intubation. Historically, etomidate has been the preferred drug for intubation in the trauma bay. Recent research has shown these concerns about ketamine to be overstated in original literature. The null hypothesis is that ketamine is comparable to etomidate as a single sedative agent for rapid sequence intubation.

Methodology

Traumatically injured patients requiring intubation were sedated with 1.5 mg/kg of ketamine prior to receiving succinylcholine for rapid sequence intubation (RSI). This group was compared to a randomly selected sample of 50 patients from historical controls. The primary endpoint was successful intubation in 3 attempts or less. Secondary endpoints were changes in blood pressure, heart rate and oxygen saturation before and after treatment with the sedating agent, as well as presence of vomiting and aspiration. Fisher's exact tests, mixed randomized-repeated measures analysis of variance and independent samples median tests were conducted as appropriate, with $p \leq .05$ denoting statistical significance for all outcomes.

Results

Data were collected on 51 patients intubated with ketamine. When compared to historic controls, there were no significant differences in successful intubation frequency, with a success rate of 94.1% in the ketamine group and 96% in the etomidate group ($p=1.00$) or median number of intubation attempts (1 and 1, $p=.48$).

No significant difference occurred for pre-post changes in sBP ($p=.39$) or pulse ($p=.88$), across both groups, or in the degree to which sBP ($p=.44$) or pulse ($p=.84$) changed from pre to post based on sedation group.

Analysis of dBP and oxygenation changes was limited by skewed distributions, heterogeneity of variance and/or extreme outlier scores. No significant between-group differences were identified for dBP and oxygenation. No significant difference was found between groups in vomiting or aspiration ($p=1.00$).

Discussion and Conclusion

Based on current data, it appears that ketamine provides appropriate conditions to facilitate successful endotracheal intubation. These results should be interpreted cautiously given the sample size limitations and exploratory study design; however, there is no obvious evidence of harm in using ketamine.

ORAL PRESENTATION ABSTRACT

A Just Culture of Safety Driving Operative Vaginal Delivery Performance Improvement

Darlene Morrissey, DO; Joseph Merola, MD, MPH; Jill Stoltzfus, PhD

Introduction/Background

This quality improvement project was initiated in support of keeping the time-honored operative vaginal delivery (OVD) a viable, safe and expeditious option for vaginal delivery. Utilized were the principles of a *Just Culture of Safety*, along with a multifactorial process of cognitive and technical training, communication, teamwork, and accountability. In so doing, the desired results of reduced pelvic trauma were sought.

Methodology

The study population included all gravidas delivering within the St. Luke's University Health Network from 2008-2011, with particular focus on the OVD cohort, or about 8-9% of all deliveries.

Several initiatives were implemented during the course of this study, including attending and resident online OVD education course; technical and simulation training for residents in OVD, episiotomy utilization and repair, and pelvic floor trauma repair; OVD "time out" and checklist; prolonged (beyond 2 hours) second stage of labor "huddle"; and spontaneous, patient-centered pushing in the second stage of labor. Measured outcomes and processes included longitudinal rates of OVD, episiotomy utilization, and pelvic trauma. We also measured compliance rates with OVD "time out", "non-directed" pushing initiative, and the prolonged second stage of labor "huddle".

Regular departmental profiling of obstetrician OVD, episiotomy and pelvic trauma rates were performed.

Results

Over the course of the study, a steady downward trend occurred in pelvic floor trauma rates, reduced by 40% ($p < .001$). Similarly, significant reductions occurred in the rate of OVD by 21.9% ($p < .001$) and episiotomy by 38% ($p < .001$).

In the last 3 months of the study, compliance with spontaneous pushing in the second stage of labor approached 56% of all vaginal deliveries – during this time there were further reductions in OVD by 66.3% ($p < .001$), pelvic trauma by 50% ($p < .10$), and episiotomy utilization by 76.1% ($p < .01$) when compared to the control "coached" pushing group.

Discussion and Conclusion

Over the 3 years of this study, a focused and multifactorial process, representing a *Just Culture of Safety* was applied to OVD performance improvement. This included educational, communication and accountability tools. Statistically significant improvements were shown in the rates of pelvic floor trauma, operative vaginal delivery and episiotomy utilization over this period. In sum, operative vaginal delivery, associated with improved outcomes and safety, should remain a viable option for expedient delivery if appropriately and expertly utilized.

ORAL PRESENTATION ABSTRACT

A Randomized Controlled Trial Comparing Ketamine to Etomidate for the Reduction of Dislocated Joints

Rex Villanueva, DO; Philip Salen, MD; Michelle Genzlinger, DO; Michael Grossman, MD; William Delong, MD; Jill Stoltzfus, PhD; Christy Stehly, BS

Introduction/Background

Etomidate has been a sedative used to facilitate joint reduction. Ketamine is a commonly used sedative for pediatric procedures. This study compared ketamine to etomidate as a procedural sedative for dislocation reduction of large joints.

Methodology

After being identified as having a dislocation requiring urgent reduction, a convenience sample of subjects was prospectively randomized to receive either ketamine or etomidate. Exclusion criteria were as follows: pregnant, age < 14 years, altered decision making capacity, and suspected cocaine abuse. The primary endpoint was successful dislocated joint reduction. Secondary endpoints were clinically important changes in vital signs, episodes of loss of airway reflexes, adverse medication reactions, necessity for repeated doses of sedative, repeated reduction attempts, and recovery time.

Results

Of 52 subjects (27 randomized to ketamine, 25 to etomidate), there was no significant difference in successful joint reduction (100% vs. 92%; $p=.23$), repeated joint reduction attempts (22% vs. 40%; $p=.17$), or repeat dosing of sedative (30% vs. 36%; $p=.63$). There were no significant group differences in clinically important post-procedure vital signs ($>20\%$ change in systolic or diastolic blood pressure, $p \geq .40$; $> 20\%$ pulsox change, 0 for both groups). The ketamine group was less likely to require airway assistance than the etomidate group for the following: chin-lift (4% vs. 33%; $p=.01$) and bag-valve-mask (0 vs. 12.5%; $p=.10$). Ketamine was less likely to induce the following adverse drug reactions: myoclonus (3.7% vs. 50%; $p<.0001$), vomiting (0 vs. 4.2%; $p=.48$) and emergence phenomenon (0 for both groups). Recovery time was longer for ketamine than etomidate: (15 minutes vs. 10 minutes; $p=.05$).

	Successful Reduction	Myoclonus	Airway Assist	Recovery Time (in minutes)
Ketamine	27/27 (100%)	1/27 (3.7%)	1/26 (3.8%)	15
Etomidate	23/25 (92%)	12/24 (50%)	8/24 (33.3%)	10
<i>p</i> -value	.23	< .0001	.009	.05

Discussion and Conclusion

Ketamine produces procedural sedation conditions for successful joint dislocation reduction that are comparable to etomidate. The significant reduction in myoclonus associated with ketamine use as well as increased requirement for airway assistance observed with etomidate suggest a potential advantage for ketamine despite a slightly longer recovery time from procedural sedation.

ORAL PRESENTATION ABSTRACT

Determination of Futility in Trauma Care and its Impact on Mortality Rate in Geriatric Trauma

*Corey Wright MD; Michael Grossman, MD; Christy Stehly, BS;
Raffaele Marchigiani, MD; Jill Stoltzfus, PhD*

Introduction/Background

The impact of withdrawal of care on mortality in geriatric trauma patients (GTPs) is unknown. We hypothesized that significant mortality in GTPs is a result of the determination of futility by the healthcare team independent of knowledge of preexisting conditions.

Methods

This was a 10-year retrospective review of GTPs (age ≥ 65) at a Level I trauma center. We abstracted medical records to determine whether care was withdrawn and under what circumstances. Data were analyzed with the Mann-Whitney rank sum test for non-normally distributed variables and the Student's t-test for normally distributed variables.

Results

A total of 284/5099 (5.6%) GTPs died. Mean age was 81.12 ± 7.71 ; Glasgow Coma Score (GCS) [median (IQR) = 9 (3-15)]; ISS [median (IQR) = 25 (10-27)]; and hospital length of stay (HLOS) [median (IQR) = 2 (1-6)]. Care was withdrawn in 198/277 patients (71.5%); it was withdrawn early (<48 hours) in 123/198 (62.1%) and late in 75/198 (37.9%). For GTPs with early withdrawal of care, severe head injury was the cause of death in 88/123 (71.5%). For GTPs in whom care was withdrawn vs. not withdrawn, ISS was higher [median (IQR) = 25 (14-29) vs. 17 (5-26), $p = .0001$] and HLOS longer [median (IQR) = 3 (1-7) vs. 1 (0-4), $p = .001$] and GCS was higher, though not significantly [median (IQR) = 9 (9-15) vs. 3 (3-15), $p = .56$]. For GTPs who died early (< 48 hours) vs. late, ISS was greater [median (IQR) = 25 (15 - 29) vs. 17 (9 - 26), $p < .0001$]. For GTPs whose deaths were caused by traumatic vs. non-traumatic sources, ISS was higher [median (IQR) = 25 (16-29) vs. 10 (5-25), $p = .005$] and HLOS was shorter [median (IQR) = 1 (1-4) vs. 5 (2-10), $p = .0001$].

Discussion and Conclusion

Over 70% of the deaths in GTPs in our center over 10 years involved withdrawal of care, and in nearly half, care was withdrawn due to presumption of futility concerning traumatic brain injury. Since both withdrawal and non-withdrawal groups had similar GCS, we assume there is a significant degree of provider subjectivity in the decision to treat patients with serious traumatic injuries. Our data demonstrate that determination of futility is common practice and has a pronounced overall impact on mortality for GTPs.

POSTER PRESENTATIONS

Note: Residents' and fellows' names are bolded.

- 1) Effect of Spironolactone on 30 Day Readmission Rate in Patients with Heart Failure Following Ultrafiltration Therapy
Mahesh Aradhya, MD; Santh Shilpershetty, MD; **Hyma Polimera, MD**; Deepakraj Gajanana, MD; Prasanna Sugathan, MD
- 2) A Comparison of Sexual Function Outcomes 1 Year after Undergoing a Transvaginal Mesh Procedure Using Polypropylene Mesh Vs. Hybrid Polypropylene/Poliglecaprone Mesh
Nina Bhatia, MD; Cristina Saiz, MD; Miles Murphy, MD, MSPH; Vincent Lucente, MD; Robin Haff, RN
- 3) Pain Control Within the First 48 Hours of Hospice Admission
AnnElise Collier, MD; **Michael Mosley, MD**; Barb Provini, RN; Deanna Seagraves, RN; Diane Hummel-Spruill, RN; Marguerite Caton, RN; Lynn Van Gelder, RN
- 4) Impact of Language Discordance on Door-to-Room Time and Patient Satisfaction in Triage
Kori Cossey, DO; Rebecca Jeanmonod, MD
- 5) Which Clinical and Laboratory Parameters Best Predict a Positive Amniotic Fluid Culture in Women with a Shortened Cervix? Results from a Large Community Hospital
Laura Greco, MD; Sarah Lopez, BS; James Airoidi, MD, MPH
- 6) Mid-Level Providers Working in a Low-Acuity Area are More Productive than When Working in a High-Acuity Area
Khalief Hamden, MD; **Michael Silberman, DO**; Mark Reiter, MD; Donald Jeanmonod, MD; Rebecca Jeanmonod, MD
- 7) A Simple, Highly Effective Emergency Department Based Pediatric Head Injury Prevention Initiative to Increase Long-Term Bicycle Helmet Use: Free Helmet Distribution Plus Education
Elizabeth Krebs, MD; **Stephen Kohut, MD**; Philip Salen, MD
- 8) Clinical Feasibility of an Improved Blood Culture Assay Enabling Universal Detection of Viable BSI Hematopathogens
John Morrison, MD; Jason Rubino, DO; Rebecca Jeanmonod, MD; S. Mark O'Hara
- 9) Does Modification of the Second Stage of Labor Reduce Risk Factors Associated with Pelvic Floor Dysfunction?
Darlene Morrissey, DO; Angela Balogch, RN, BSN; Joseph Merola, MD, MPH

POSTER PRESENTATIONS

Note: Residents' and fellows' names are bolded.

- 10) Reducing 30-Days Readmissions of Patients with Heart Failure Residing in Long Term Care Settings
Netrali Patel, MD; Amaravani Mandalapu, MD; Paula Bordelon, DO; Maria Ghetu, MD; Ashish Patel, MD
- 11) Does Ultrafiltration for Acute Decompensated Heart Failure by Aquapheresis Increase Bleeding Risk?
Hyma Polimera, MD; Santh Silparshetty, MD; **Mahesh Aradhya, MD;** Deepakraj Gajanana, MD; Ellen Amedeo, RN; Prasanna Sugathan, MD
- 12) Access and Use of Primary Care Services and their Effect on Emergency Department Visits
Suzanne Roozendaal, DO; Kelly Coller, PA; Holly Stankewicz, DO; John Prestosh, DO
- 13) End of Life Planning and Outpatient Residency Clinics: Can They Coexist?
Erin Smith, DO, MA; Cara Ruggeri, DO; **Marcela Perez, MD**
- 14) Accuracy of Measurements when Using Open Vs. Blinded Simulated Cervical Dilation Models
Mari Charisse Trinidad, MD; James Anasti, MD
- 15) Videolaryngoscopy in Trauma Patients: Theoretic and Technical Considerations
Roger Wong, MD; Michael Grossman, MD; Michele Genzlinger, DO; Christy Stehly, BS

POSTER PRESENTATION ABSTRACT

Effect of Spironolactone on 30 Day Readmission Rate in Patients with Heart Failure Following Ultrafiltration Therapy

*Mahesh Aradhya, MD; Santh Shilpershetty, MD; Hyma Polimera, MD;
Deepakraj Gajanana, MD; Prasanna Sugathan, MD*

Introduction/Background

Heart Failure Society of America and American College of Cardiology/American Heart Association guidelines support the use of ultrafiltration (UF) for the treatment of patients with fluid overload attributable to heart failure (HF) with or without renal and pulmonary comorbidities. UF therapy has been associated with reduction in rehospitalization rate. We hypothesize that spironolactone will reduce the 30-day readmission rate in patients with HF who were treated with UF for volume overload.

Methodology

At St Luke's University Health Network in Bethlehem, PA, ultrafiltration therapy is prescribed and managed by Heart Failure Management Program practitioners using the Aquapheresis by Aquadex system. Retrospective chart review and data collection were performed on patients with a history of HF including right and left ventricular failure who were treated with UF for fluid overload between December 2008 and November 2010. The 30-day readmission rate for patients who were discharged on spironolactone was compared with that of patients who were not discharged on spironolactone after UF therapy.

Results

One hundred eighty treatments were performed between December 2008 and November 2010. Mean age \pm standard deviation (SD) was 73.7 ± 11.1 ; 124 (68.9%) were >70 years of age and 103 (57.2%) were male. Mean baseline creatinine level (\pm SD) was 2.2 ± 1.0 mg/dL; 32 patients (17.8%) reported baseline creatinine levels >3.0 mg/dL. Patients were treated with a mean dose of 133 mg once daily of a loop diuretic (furosemide or equivalent) and 31 patients were treated with spironolactone at admission. After

UF treatment mean creatinine level (\pm SD) was 2.1 ± 0.6 mg/dL with no change in renal function from baseline. From the 180 treatments, 23 patients (12.8%) were referred to hospice and were therefore excluded from the analysis. Of the 157 remaining UF treatments, 34 patients (21.6%) were discharged on spironolactone and 123 (78.3%) were not discharged on spironolactone. The 30-day readmission rate was 14.7% (5/34) for the spironolactone group and 22% (27/123) for the non-spironolactone group.

Discussion and Conclusion

Spironolactone significantly decreases the 30-day readmission rate in HF patients receiving UF for therapy.

POSTER PRESENTATION ABSTRACT

A Comparison of Sexual Function Outcomes 1 Year After Undergoing a Transvaginal Mesh Procedure Using Polypropylene Mesh Vs. Hybrid Polypropylene/Poliglecaprone Mesh

*Nina Bhatia, MD; Cristina Saiz, MD; Miles Murphy, MD, MSPH;
Vincent Lucente, MD; Robin Haff, RN*

Introduction/Background

We sought to assess sexual function outcomes in patients undergoing the transvaginal mesh (Prolift) procedure using either the standard polypropylene mesh or a hybrid mesh composed of polypropylene and absorbable poliglecaprone 25 (Monocryl) fibers (Prolift+M) for pelvic organ prolapse through a comparison of pre- and post-operative responses to the Pelvic Organ Prolapse Urinary Incontinence Sexual Questionnaire (PISQ-12).

Methodology

This is a retrospective cohort study assessing sexual health as measured by the PISQ-12 following surgical correction of pelvic organ prolapse. Patients who underwent the Prolift+M surgery between 8/13/08 and 6/06/09 were included and compared to age-matched, sexually active controls who underwent the standard Prolift procedure between 2/14/05 and 6/06/09. All patients completed the PISQ-12 questionnaire and had POPQ measurements taken preoperatively and at 4 and 12 months postoperatively. Univariate analysis comparing baseline and outcome data between the 2 surgical groups was conducted via independent-samples *t* tests for continuous data using SPSS 15.0.

Results

Out of 102 patients who met inclusion criteria, 71 patients at 4 months (n=39 standard mesh; n= 32 +M mesh) and 40 patients at 1 year (n=20 standard mesh; n= 20 +M mesh) had completed both preoperative and postoperative PISQ forms. There was no statistically significant difference in preoperative PISQ scores, age, BMI, POPQ points Ba, Bp, C and total vaginal length. Total PISQ scores improved significantly in the standard mesh group and +M mesh group at both 4 months and 1 year postoperatively.

For the hybrid mesh group, there was a statistically significant improvement in postoperative sexual desire (PISQ #1, p=.03), comfort with intercourse (PISQ #5, p=.02), and overall sexual function (Total PISQ Score, p=.02) compared to standard mesh at 4 months, but not at 1 year postoperatively. Total PISQ scores also increased significantly in both groups between 4 months and 1 year postoperatively, with greater (though non-significant) improvement in the standard mesh group.

Discussion and Conclusion

Pelvic floor-related sexual health as defined by changes in the PISQ-12 improves with treatment of prolapse using the transvaginal mesh technique. When a hybrid mesh composed of permanent and absorbable fibers is used, compared to the traditional all-polypropylene mesh, this improvement appears to be greater in the short-term, although there is no significant difference at 1 year in this small cohort study. Sexual health, however, appears to improve with both mesh materials between 4 months and 1 year postoperatively.

POSTER PRESENTATION ABSTRACT

Pain Control Within the First 48 Hours of Hospice Admission

*AnnElise Collier, MD; Michael Mosley, MD; Barb Provini, RN; Deanna Seagraves, RN;
Diane Hummel-Spruill, RN; Marguerite Caton, RN; Lynn Van Gelder, RN*

Introduction/Background

Pain control within 48 hours of hospice admission has been recognized as a quality measure by the National Hospice and Palliative Care Organization. Section 3004 of the Affordable Care Act requires hospices to submit quality measures to the Health and Human Services Secretary. One of the required measures will be NFQ #0209, also known as the Comfortable Dying Measure. As of April 2013 Medicare will implement mandatory reporting on the percentage of patients who were uncomfortable because of pain on admission to hospice whose pain was brought under control within 48 hours.

Methodology

Working with the St. Luke's Hospice Quality Officer and four hospice nurses a protocol was designed to help document and control pain within 48 hours of hospice admission. If the patient's pain was rated as > 4 on the Edmonton Symptom Assessment Scale (ESAS) *and* they were unsatisfied with their current level of pain, the protocol was initiated. The protocol consisted of a phone call the patient's physician to discuss interventions and scheduled patient follow-up calls and visits throughout the first 48 hours until the pain was controlled.

Results

Implementation of the protocol increased the documentation of pain control within 48 hours of hospice admission from 54% to 60%. Excluded from these percentages were patients with no documentation of an ESAS within 48 hours of admission and patients who had no admission ESAS but subsequent documentation of controlled pain. The protocol helped reduce the number of failures secondary to untimely follow up visits from 59% to 29%.

Discussion and Conclusions

The initiation of a protocol to document and control pain within the first 48 hours of hospice admission did not meet our projected goal of 90% of patients with documented controlled pain. On a follow-up survey given to nurses the most common barriers to successful implementation of the protocol were being forgetful and inadequate documentation time. The most common suggestions for improving the success rate were better communication during patient handoffs and regular group feedback.

POSTER PRESENTATION ABSTRACT

Impact of Language Discordance on Door-to-Room Time and Patient Satisfaction in Triage

Kori Cossey, DO; Rebecca Jeanmonod, MD

Introduction/Background

Each year, around 75% of the approximately 120 million emergency department (ED) visits are walk-in patients requiring triage by nursing staff. The ability of the triage nurse to accurately communicate with patients is essential to prioritizing their care in the ED. This study looked at language discordance as reported by both the patient and the nurse, and whether language discordance had an effect on door-to-room time.

Methodology

This was a prospective cross-sectional survey of patients between the ages of 18-65 who walked into the ED. Patients and nurses were asked to complete a survey in which patients identified their primary language and then were evaluated for the same by the triage nurse. Wait times for Spanish-speaking and English-speaking were compared.

Results

Sixty-two patients were surveyed, and it was determined that nurses overestimated the English language capabilities of patients (Fisher exact $p < .003$). A total of 64.3% of patients who were self-reported to be primarily non-English speaking reported that a translation tool, such as a language line or medical translator, was not used during the triage process. No significant difference in wait times between English- and non-English-speaking patients was identified.

Discussion and Conclusion

This study demonstrated that triage nurses may overestimate the language abilities of patients and therefore may not offer the translation services deemed to be the standard of care. Miscommunication due to language barriers can lead to over- and under-triaging, delays in care and potentially negative outcomes. The primary limitation of this study was a small sample size. Future studies should include evaluation of Spanish language proficiency of the triage nurse and the subsequent accuracy of triage level.

POSTER PRESENTATION ABSTRACT

Which Clinical and Laboratory Parameters Best Predict a Positive Amniotic Fluid Culture in Women with a Shortened Cervix? Results from a Large Community Hospital

Laura Greco, MD; Sarah Lopez, BS; James Airoidi, MD, MPH

Introduction/Background

There are clinical and laboratory parameters that are available to practitioners in caring for women with a shortened cervix who have undergone amniocentesis prior to the amniotic fluid culture results. There is often a two-day lag between early parameters and culture results. Our objective was to assess which clinical parameters best predict a positive amniotic fluid culture.

Methodology

This is a retrospective cohort study. A large amniocentesis database that is maintained at St. Luke's University Hospital was queried for all cases of amniocenteses that were performed for infection in women with a shortened cervix. The information obtained included the shortest cervical length just prior to the amniocentesis, gestational age, leukocyte esterase, amniotic fluid glucose, amniotic fluid white blood cell count, and the presence of at least 1+ polymorphonuclear leukocytes on gram stain. Statistical analysis included the Student's t-test for continuous variables and chi-square test for categorical variables

Results

There was no significant difference in the mean gestational age when comparing the infected versus non-infected group (28.09 vs. 28.58, $p=.63$), nor any difference in the shortest cervical length (10.6 vs. 12.3 mm, $p=.34$). Amniotic fluid glucose almost reached statistical significance (26.2 vs. 37.1, $p=.06$), as did white blood cell count (29.9 vs. 33.6, $p=.06$). The leukocyte esterase showed a positive predictive value (PPV) of 38% and a negative predicted value (NPV) of 87%. The leukocyte esterase was statistically significant ($p=.004$). The gram stain showed a PPV of 55% and a NPV of 94% and again was statistically significant ($p=.0005$)

Discussion and Conclusion

A gram stain of 1+ or more polymorphonuclear leukocytes and the presence of leukocyte esterase were significantly predictive of a positive amniotic fluid culture. Amniotic fluid glucose and amniotic fluid WBC count almost reached significance as well. All four of these parameters appeared to perform very well in differentiating between infected amniotic fluid and non-infected amniotic fluid. Interestingly, the cervical length at the time of amniocentesis had no predictive value for determining infection in the amniotic fluid.

POSTER PRESENTATION ABSTRACT

Mid-Level Providers Working in a Low-Acuity Area are More Productive than When Working in a High-Acuity Area

*Khalief Hamden, MD; Michael Silberman, DO; Mark Reiter, MD;
Donald Jeanmonod, MD; Rebecca Jeanmonod, MD*

Introduction/Background

Emergency department (ED) patient visits have risen significantly in recent years. Consequently, many EDs utilize mid-level providers (MLPs) to help augment the emergency physician workforce given a rising ED census. Both the proportion of EDs reporting use of MLPs and the number of ED patients treated by MLPs have increased dramatically.

MLPs typically see a low acuity case mix; however current guidelines do not address the function of the MLP in the care of high acuity patients. As a result, MLPs may serve in a variety of roles depending on state law and hospital policy. Although MLPs are most commonly tasked with the care of patients triaged as low-acuity rather than high-acuity, there is little evidence to support this practice. The object of this study is to better delineate the role of MLPs staffing the ED by comparing productivity when staffing low-acuity and high-acuity areas. Productivity in this study is determined by examining patients/hour, RVUs/hour, and RVUs/patient.

Methodology

This is a retrospective review of MLP productivity at a single center, 42,000-volume community ED from July 2009-September 2010. MLPs staffed day shifts (8:00 am – 6:00 pm or 10:00 am – 10:00 pm) in high- and low-acuity sections of the ED. A two-tailed t-test was utilized to compare patients/hour, Relative Value Units (RVUs)/hour, and RVUs/patient between the two MLP groups.

Results

A total of 49 low-acuity and 55 high-acuity shifts were included in this study. During the study period, MLPs staffing low-acuity shifts treated a mean of 2.7 patients/hour (95% CI 2.47 – 2.93) while those staffing high-acuity shifts treated a mean of 1.56 patients/hour (95% CI 1.42 – 1.70, $p < .0001$). MLPs staffing low-acuity shifts generated a mean of 4.45 RVUs/hour (95% CI 4.11 – 4.79) compared to 3.19 RVUs/hour (95% CI 2.90 – 3.48) for those staffing high-acuity shifts ($p < .0001$). MLPs staffing low-acuity shifts generated a mean of 1.68 RVUs/patient (95% CI 1.62 – 1.74), while those staffing high-acuity shifts generated a mean RVUs/patient of 2.05 (95% CI 1.96 – 2.14, $p < .0001$).

Discussion and Conclusion

MLPs staffing a low-acuity area treated more patients/hour and generated more RVUs/hour than when staffing a high-acuity area. However, there was evidence of significant variability between MLPs and lower than expected RVUs/patient in the high-acuity area, suggesting that documentation deficiencies may have played a role in our results. Further studies are required to determine the factors affecting MLP productivity in low- and high-acuity settings.

POSTER PRESENTATION ABSTRACT

A Simple, Highly Effective Emergency Department Based Pediatric Head Injury Prevention Initiative to Increase Long-term Bicycle Helmet Use: Free Helmet Distribution Plus Education

Elizabeth Krebs, MD; Stephen Kohut, MD; Philip Salen, MD

Introduction/Background

Wearing a helmet is a highly effective means of reducing head injuries and deaths related to bicycle accidents, providing an 85-88% reduction in the risk of head injury for bicyclists of any age.¹ It is estimated that universal use of bicycle helmets by children aged 4-15 years old would result in prevention of 135-155 deaths and 39,000-45,000 head injuries annually.² In 2010, an investigational study to assess the effectiveness of a combination of free bicycle helmet distribution and education was conducted in the emergency department of St. Luke's University Hospital in Bethlehem, PA.

Methodology

Children ages 4-12 who presented as patients or with family members were questioned regarding bicycle helmet usage, and if they reported a need, they were fitted for a helmet as well as given counseling and educational materials. Participants agreed to receive a follow up call 1-12 months after receipt of the helmet to report whether or not the child was still using the helmet.

Results

We enrolled a total of 146 participants but were only able to contact 94 of them, mostly due to incorrect phone numbers. Ninety-eight percent of participants we contacted reported that their child was still using the helmet. Only two participants reported no longer using the helmets, and both cited current inability to use a bicycle.

Discussion and Conclusion

Our simple program of a combination of free bicycle helmet distribution plus education was 98% effective at increasing pediatric helmet usage 1-12 months post-distribution.

¹ National Highway Traffic Safety Administration. (2008). Traffic Safety Facts: Laws, Bicycle Helmet Use Laws. Retrieved from <http://www.nhtsa.gov/people/injury/TSFLaws/PDFs/810886.pdf>

² U.S. Consumer Products Safety Commission (CPSC). Bicycle-related head injury or death. Washington (DC): CPSC, 1994.

POSTER PRESENTATION ABSTRACT

Clinical Feasibility of an Improved Blood Culture Assay Enabling Universal Detection of Viable BSI Hematopathogens

John Morrison, MD; Jason Rubino, DO; Rebecca Jeanmonod, MD; S. Mark O'Hara

Introduction/Background

The diagnosis of blood stream infection (BSI) is usually made on clinical grounds due to the length of time to detection needed to obtain blood culture (BC) results, which is the gold standard test. Zeus Scientific Inc. has developed a viability protein linked-PCR (VP-PCR) assay that detects hematopathogens in model systems three times faster than BC. The aim of our study was to validate this novel test with suspected BSI patients in a clinical setting.

Methodology

This prospective cohort study was performed at a level 1 community trauma center with an annual census of 75,000. It was reviewed and approved by the IRB. After informed consent, a convenience sample of patients with suspected BSI was enrolled. For each enrolled patient, routine hospital BCs were obtained (4 BC bottles: 2 aerobic and 2 anaerobic). For the Zeus (Z) VP-PCR test, one additional aerobic BC bottle was obtained. The single Z BC bottle was blind coded, refrigerated and twice weekly transported 50 miles for independent incubation and VP-PCR time course testing. VP-PCR test was performed on 1 mL time course aliquots from the single Z BC bottle. Patients' hospital BC laboratory results were decoded and compared to the Z BC and VP-PCR results. Sensitivity and specificity of Z VP-PCR was determined as compared to the gold standard of hospital lab BC results as well as to Z BC results.

Results

Preliminary data from 223 patients were analyzed comparing hospital BC to Z VP-PCR as well as comparing Z BC to Z VP-PCR. There were a total of 23/223 (10.3%) gold standard positive hospital BCs. Z VP-PCR performed with a sensitivity of 88% and a specificity of 99% as compared to hospital BC. Z VP-PCR performed with a sensitivity of 100% and a specificity of 100% when compared to Z BC. VP-PCR positives detected BSI 3 times earlier than any of its 5 corresponding BC bottle incubator flip times.

Discussion and Conclusion

Z VP-PCR test provides early detection of BSI with a high rate of sensitivity and specificity. Discordance in Z BC and hospital BC may be secondary to specimen handling, but requires additional study. With successful validation, Z VP-PCR should be studied further to determine if its use improves patient outcomes.

POSTER PRESENTATION ABSTRACT

Does Modification of the Second Stage of Labor Reduce Risk Factors Associated with Pelvic Floor Dysfunction?

Darlene Morrissey, DO; Angela Balogh, RN, BSN; Joseph Merola, MD, MPH

Introduction/Background

Current literature suggests that operative vaginal delivery (OVD), significant pelvic trauma (3rd and 4th degree lacerations), and episiotomy are associated with pelvic floor dysfunction among parous women. In our institution, the labor nurses have started an initiative to focus on spontaneous, patient centered pushing to facilitate the second stage of labor. This study focuses on the modification of the second stage of labor by comparing spontaneous pushing and passive descent vs. coached pushing as a means to protect the pelvic floor.

Methodology

This study was designed as a retrospective cross-sectional study of cephalic, singleton births from January to July 2011. Women included in this study were comparable in age and parity. We evaluated the rates of pelvic trauma, OVD, and episiotomy among women who were coached in pushing (n=506) vs. those who voluntarily engaged in spontaneous pushing (n=809). Those women who received a c-section during any stage of labor were excluded. Outcomes were compared with the use of chi-square analysis ($p < 0.05$) to determine statistical significance.

Results

Spontaneous pushing, as a modification of the second stage of labor, resulted in decreased rates of OVD ($p < .001$), 3rd and 4th degree perineal lacerations ($p < .003$), and episiotomies ($p < .018$).

Discussion and Conclusion

Obstetricians have a responsibility to their patients to facilitate a vaginal delivery that will minimize trauma to the pelvic floor. Future randomized prospective studies are needed to draw a strong conclusion on the best management of the second stage of labor. In this study, there appears to be a relationship between spontaneous, patient centered pushing and minimizing risk factors associated with pelvic floor dysfunction.

POSTER PRESENTATION ABSTRACT

Reducing 30-Days Readmissions of Patients with Heart Failure Residing in Long Term Care Settings

Netrali Patel, MD; Amaravani Mandalapu, MD; Paula Bordelon, DO; Maria Ghetu, MD; Ashish Patel, MD

Introduction/Background

Heart failure (HF) is the most common cause of readmission of elderly patients from long term care (LTC) facilities, and more Medicare dollars are spent managing patients with HF than for any other diagnosis. HF primarily affects the elderly, and it is estimated that 80% of patients hospitalized for HF are over 65 years of age. Managing HF in these circumstances requires involvement of practitioners and interdisciplinary teams to prevent hospital readmissions, reduce healthcare costs, and improve quality of life. Therefore, our objective was to develop and implement a non-pharmacologic, multidisciplinary intervention based on American Medical Director Association guidelines to educate medical professionals involved with resident care in LTC facilities, reduce hospital readmissions, and determine the potential impact on patient outcomes. The study setting included Gracedale Nursing Home, Cedar Brook Nursing Home, and St. Luke's University Health Network.

Methodology

This is a pilot study using retrospective chart review methodology with randomly selected charts (based on a computer-generated random numbers table) to identify patients with readmissions within 30 days of hospitalization for HF. As part of this pilot study, the researchers implemented a non-pharmacologic, multidisciplinary educational protocol for HF based on standard of care for practitioners and nursing staff.

The number of hospital admissions for a 2-month period was recorded prior to initiation of the HF protocol in the LTC setting. Inclusion criteria were LTC residents (Gracedale Nursing Home, Cedar Brook) \geq 65 years diagnosed with congestive HF. Exclusion criteria were valvular heart diseases and decompensated HF (NYHA Class IV).

Results

All patients were followed for a 60-day period after initiating the HF protocol. Out of 26 patients, 1 patient (4.7%) was readmitted with congestive HF exacerbation within a 1-month period after initiating the HF protocol, and 5 patients (19%) died. In the subgroup of patients at intermediate risk for readmission (n=26), readmissions were reduced to 3.8% (from 30.7% to 4.7 %)

Discussion and Conclusion

Implementing an evidence and guideline-based HF protocol reduces hospital readmissions, particularly in patients at moderate risk for early re-hospitalization; reduces healthcare costs; and increases adherence to guideline-based processes of care. Further evaluation of this intervention protocol for a longer period and incorporating length of stay as an additional outcome is warranted.

POSTER PRESENTATION ABSTRACT

Does Ultrafiltration for Acute Decompensated Heart Failure by Aquapheresis Increase Bleeding Risk?

Hyma Polimera, MD; Santh Silparshetty, MD; Mahesh Aradhya, MD; Deepakraj Gajanana, MD; Ellen Amedeo, RN; Prasanna Sugathan, MD

Introduction/Background

Heart Failure Society of America and American College of Cardiology/American Heart Association guidelines support the use of ultrafiltration therapy (UF) for acute decompensated heart failure (ADHF) with volume overload. We evaluated the risk of bleeding during aquapheresis (AQ) on intravenous anticoagulation by assessing transfusion requirements.

Methodology

We conducted a retrospective chart review of extracted data for admissions with AQ from December 2008 to November 2010. IRB exemption was granted. Using weight-based heparin or argatroban protocol, infusion was initiated without a loading dose in warfarin-treated patients. Warfarin was not discontinued. Of the 180 AQ performed, 42 patients received blood transfusions during their hospitalization.

Results

	Group 1	Group 2
N	25	17
Age	78±7.8	72±8.7
Warfarin	10	7
Bleed	5	5
Bleed on warfarin	2	2
Transfusion rate %	2.77	2.77
Hb on Admission	8.38	9.76
Hb at Transfusion	7.75	7.58
Hb on Discharge	9.14	9.0

Group 1: transfusion during or < 24 hours post-AQ

Group 2: transfusion temporally unrelated to AQ

Discussion and Conclusion

In our experience, anticoagulation associated with UF by AQ for ADHF does not increase bleeding risk as assessed by transfusion requirements.

POSTER PRESENTATION ABSTRACT

Access and Use of Primary Care Services and their Effect on Emergency Department Visits

Suzanne Roozendaal, DO; Kelly Coller, PA; Holly Stankewicz, DO; John Prestosh, DO

Introduction/Background

Emergency facilities are becoming increasingly overwhelmed with patients coming in with chief complaints that are appropriate for the primary care setting. Lack of insurance and poor access to established primary care providers (PCP) are often cited as reasons for patients coming into the Emergency Department (ED) with these acute and chronic non-emergent conditions.

Methodology

A total of 397 patients at St Luke's University Hospital who were triaged and found to have non-emergent conditions were surveyed regarding the reason for their visit, insurance status, whether they believed their visit was emergent, and reasons why they chose the ED over their primary care office (if they had a PCP).

Results

A total of 80.2% (309/385) of patients surveyed had insurance. A statistically significant relationship was found between having insurance and having a PCP (241/267, $p < .0001$), and a higher percentage of patients with a primary care physician carried government medical assistance (Medicaid) (50.9% vs. 32.2%). Of the patients who did have a PCP at the time of visit, 57.9% (146/252) did not attempt to contact their PCP prior to coming to the ED; 30.0% (93/258) believed their condition was too serious for their PCP to handle; 25.2% (64/243) stated that their PCP referred them to the ED for this visit; 42.7% (106/248) believed their PCP was not available; 62.1% (161/259) stated that the ED was more convenient; 54.8% (136/248) preferred the "one stop" service they receive in the ED; 52.9% (135/255) stated that the hospital was closer/easier to get to than their PCP; 50.3% (129/256) believed they received faster service than at their PCP; 58.9% (151/256) of patients believed they received better service in the ED; and 51.3% (130/253) chose the ED over their PCP knowing that it cost more.

Discussion and Conclusions

The majority of patients surveyed had medical insurance and established primary care services, yet did not attempt to contact their PCP prior to coming to the ED for a non-emergent condition. Furthermore, they felt that the ED was more convenient/easier to get to, they received better and faster service in the ED than at their PCP office, they preferred the "one stop" services, and they chose to come to the ED even though it cost more. Additionally, the minority of patients believed their condition was too serious for their PCP to handle. With the emergence of health care reform in our country, plans for universal health care are on the horizon. The authors cite the importance of creating readily accessible, convenient and quality primary care services, as well as educating patients about how to best access that care in order to offset the cost of, as well as the strain on, ED services.

POSTER PRESENTATION ABSTRACT

End of Life Planning and Outpatient Residency Clinics: Can They Coexist?

Erin Smith, DO, MA; Cara Ruggeri, DO; Marcela Perez, MD

Introduction/Background

End of life planning has become increasingly important over the years due to the aging population and seeming paradigm shift of healthcare. However, do residents receive quality education on this subject and offer counseling to their patients in resident-run outpatient clinics? Studies demonstrate that few resident-run clinics offer information to their patients, and multiple barriers remain in the clinic restricting residents from discussing these matters.

It is the intent of this study to evaluate how often these discussions are occurring and the baseline knowledge of this topic in a resident-run outpatient clinic.

Methodology

This is a retrospective review of a convenience sample of 76 charts from the Southside Medical Center. Inclusion criteria were patients older than 65, ≥ 2 co-morbidities, and seen in past 6 months. Exclusion criteria were patients with HIV and patients followed by advanced practitioners to document if end of life care conversations occurred.

Internal Medicine residents completed a survey to ascertain knowledge of advanced directives, living wills, Durable Power of Attorney (DPOA) and comfort level in discussing said topics.

Results

All residency levels were represented (23 PGY-1; 33 PGY-2; 20 PGY-3). The mean age of patients was 72.03. Only one chart documented discussion (1.2%).

Twenty-three residents completed the survey across all levels of training. A total of 43.5% could define an advanced directive; 65.2% recognized the acronym DPOA; 73.9% correctly explained Do Not Resuscitate/Do Not Intubate (DNR/DNI) status; 8.6% knew what a living will was; and 0% knew when it becomes effective. The majority of residents (87%) felt comfortable in bringing up the subject.

Discussion and Conclusion

We have concluded that residents, although comfortable with it, are not regularly discussing end of life planning in the outpatient setting. Furthermore, it appears that the education in these topics is inadequate, with less than half of residents capable of describing an advanced directive and living will.

We are planning to continue this project for two additional phases. Phase 2 will involve an “intervention period” that will train residents using an educational series over several months. Phase 3 will be a post-intervention chart audit and survey to see if the intervention/education led to more documented encounters and improved resident knowledge.

POSTER PRESENTATION ABSTRACT

Accuracy of Measurements when Using Open Vs. Blinded Simulated Cervical Dilation Models

Mari Charisse Trinidad, MD; James Anasti, MD

Introduction/Background

Accurate assessment of cervical dilation is essential in the management of labor. This study aims to determine the accuracy of measurements when using open vs. blinded simulated cervical dilation models.

Methodology

Hard cervical dilation models calibrated from closed to 10 cm were used. These were initially examined open and then placed in chambers that allowed for the examinations to be done blinded. Twenty OBGYN residents and 10 medical students participated in the study.

Results

A total of 308 paired open and blinded cervical dilation measurements were obtained from 28 different examiners in a two-part study.

The overall accuracy rate was 84% when using the open simulated cervical dilation models. Only 58% were correct when measurements were done blinded.

There was a statistically significant difference in the average percentage of correct responses between the open vs. blinded groups as a whole and between PGY subgroups ($p < .0004$).

For medical students, although there was a higher percentage of correct measurements in the open vs. blinded models, this did not reach statistical significance.

Discussion and Conclusion

The actual assessment of the cervix during labor relies mainly on proprioception, with the absence of visual cues that may aid in measurement. These results suggest the need for the right educational tools and models that will allow residents and students to develop the necessary proprioception skills to assess cervical dilation accurately and consistently.

Further studies are needed to objectively determine the impact of the use of closed vs. open models on this particular skill acquisition.

POSTER PRESENTATION ABSTRACT

Videolaryngoscopy in Trauma Patients: Theoretic and Technical Considerations

Roger Wong, MD; Michael Grossman, MD; Michele Genzlinger, DO; Christy Stehly, BS

Introduction/Background

Trauma patients present difficulties in airway management due to the need for manual in-line stabilization of the cervical spine, presence of rigid cervical collars, and the frequent presence of blood, vomitus, and secretions in the airway. Videolaryngoscopy offers an alternative to direct laryngoscopy for airway management in trauma patients. Many studies have demonstrated reduced overall difficulty of intubation when using videolaryngoscopy compared to conventional methods.

Methodology

We retrospectively collected data from trauma bay intubations that involved the use of videolaryngoscopy for one of three indications: 1) primary intubating device, 2) rescue intubating device, and 3) endotracheal tube placement confirmation of patients intubated pre-hospital.

Results

Twenty-two trauma patients were included in this study. In twelve patients, video laryngoscopy was used as a primary intubating device. In two patients, video laryngoscopy was used as a rescue airway device. In seven patients, video laryngoscopy was used for endotracheal tube confirmation of patients intubated pre-hospital.

Discussion and Conclusion

Videolaryngoscopy is an alternative for airway management in trauma patients. It offers improved views of laryngeal anatomy and is a valuable adjunct to airway management in trauma patients as a primary intubation tool, a rescue device, or for confirmation of endotracheal tube placement in patients intubated pre-hospital.

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