clinical, and surgical factors associated with thrombosis in infants with single ventricle CHD. In addition, I will compare the rates of thrombotic complications between the 2 most commonly used approaches for stage I palliation for the group of patients with hypoplastic left heart type of anatomy (MBTS vs. RVPAS) and will test the hypothesis that the risk of thrombotic complications is associated with the stage of palliative surgery (stage I vs. stage II). Specific Aim 2: We will test identified demographic, clinical, surgical, and newly identified variables in a univariable and multivariable analysis and study their potential interactions to construct a novel risk predictive model specific for single ventricle CHD. RESULTS/ANTICIPATED RESULTS: To determine feasibility for adequate numbers to be able to address the research aims, a preliminary analysis dataset was performed using a dataset from the Pediatric Heart Network. The PHN is a collaborative group of hospitals that participates in clinical research studies in children with CHD. For the SVR clinical trial, the PHN conducted a randomized clinical trial at 15 centers in North America between 2005 and 2009, prospectively enrolling infants with HLHS or single right ventricle anomalies who were to undergo the Stage I Norwood procedure. A total of 920 newborns were screened; 664 were medically eligible and 549 patients were randomized. The primary aim of the trial was to compare survival of infants randomized to receive either the Norwood procedure with the MBTS or the RVPAS. These patients were followed at specific time points, including from baseline (pre-Norwood), at the time of the Norwood procedure, between stage I and II, following stage II reconstruction, and at 14 months of age. At these time points, data were collected that includes demographic, radiologic, clinical, and surgical outcomes. Included in the clinical outcomes are complications, such a thrombosis. There was no screening process to assess for asymptomatic thromboses, suggesting that most, if not all, discovered thromboses were due to clinically relevant effects. A newer iteration of this study (SVRIII) expands the monitoring of this cohort until the Fontan stage at 2–6 years of age, but these data have not yet been released in the public use data set. A descriptive analysis of the frequency of thrombotic complications was assessed at each time point, as well as in aggregate. Data were extracted from the specific time periods of interest, identified as Pre-Norwood, during Norwood Hospitalization, in-between visits, and during Stage II Hospitalization. There were 549 infants who were randomized with available data to analyze. During the Norwood hospitalization, 37 infants had a thrombotic complication. Between Stage I and Stage II outpatient visits, 8 infants had a thrombotic complication. During Stage II hospitalization, 16 infants had a thrombus. Overall, 61 individual patients (11%) had a thrombotic complication. DISCUSSION/SIGNIFICANCE OF IMPACT: This study utilizing data from the Pediatric Heart will be the largest cohort ever utilized for characterizing thrombotic complications and determining the factors associated with thrombosis across the first and second stages of surgical reconstruction. More than 500 (n = 549) subject's data will be analyzed through the first two stages of reconstruction, while the largest analysis before this proposed analysis only included a total of 195 children. Notably, these prior studies did not include a comparison between the 2 shunt types in stage I reconstruction, leaving a gap in knowledge regarding the incidence of thrombosis comparing these groups. The analysis will be the first to address this gap and update the current literature. Preliminary data show that the overall incidence of thrombosis across the first 2 stages of surgical reconstruction was 11%, which is lower than the previously reported overall rates of 40%–50%. Despite the continued lack of evidence-based guidelines for thromboprophylaxis methods, the decreased overall rate is most likely due to more widespread practice of anticoagulation in general. Determining the factors associated with thrombosis across the first and second stages of surgical reconstruction will help identify those at risk. An innovative aspect of this analysis will be the use of disease-specific factors to develop a model to predict thrombosis. Unique factors include cardiac variables like ejection fraction, baseline oxygen saturation, shunt type (MBTS vs. RVPAS), and other echocardiographic parameters. While the use of thromboprophylaxis has been associated with decreased risk of thrombosis, there is no general consensus to guide thromboprophylaxis in this population, which can be burdensome and costly. Determining which subset of infants with single ventricle CHD are at increased risk of developing thrombotic complications will allow for the development of a prediction model to predict those at highest risk of developing a thrombotic complication. Developing a predictive model will be a novel way to identify patients at risk for thrombosis and will set the stage for targeted prevention of thrombosis.

2013

Trends in anogenital warts incidence: Potential impact of human papillomavirus vaccination, TennCare 2006–2015

Jaimie Z. Sing, Marie Griffin, Manideepthi Pemmaraju, Edward Mitchel and Pamela Hull
Vanderbilt University Medical Center

OBJECTIVES/SPECIFIC AIMS: We aimed to assess trends in incidence of genital warts across human papillomavirus (HPV) vaccine-eligible and nonvaccine-eligible age groups to determine the impact of the HPV vaccine among Medicaid enrollees in the state of Tennessee. METHODS/STUDY POPULATION: We analyzed 2006–2014 medical and pharmaceutical claims data from TennCare (Tennessee's Medicaid program) enrollees aged 15–64 years. Incident cases of genital warts were defined as persons 12 months disease free and: (1) a diagnosis of condyloma acuminatum, or (2) a diagnosis of viral warts and genital-specific procedure, or (3) a prescription for genital warts medication and genital-specific procedure. Mann-Kendall trend tests were performed to assess for significant trends in incidence of genital warts by sex and age group; average annual percent changes were calculated to quantify these trends. RESULTS/ANTICIPATED RESULTS: Our analysis is in progress. We hypothesize that we will observe declines in genital warts among younger, vaccine-eligible age groups and no changes in older, nonvaccine-eligible age groups, with largest declines among females aged 15–19 years from 2006 to 2014. We also expect to see declines among younger males due to herd protection, with greater declines after 2011, when the vaccine was approved for males. DISCUSSION/SIGNIFICANCE OF IMPACT: Significant declines among younger compared with older age groups would suggest HPV vaccine effectiveness for preventing genital warts.

2279

Understanding care delivered to patients with a possible concussion at an urban level 1 trauma center

Chet C. Zalesky[1], David W. Wright[2], Sanam Patel[3] and Rachel K. Patzer[4]
[1] Emory University; [2] Department of Emergency Medicine, Injury Prevention Research Center, Emory University School of Medicine, Emory University; [3] Medical College of Georgia, AU/UGA Medical Partnership; [4] Department of Emergency Medicine, Emory University School of Medicine

OBJECTIVES/SPECIFIC AIMS: Background: Annually, 2.5 million traumatic brain injuries (TBI) occur with nearly 75% classified as mild TBI (mTBI), also known as a concussion. Mild TBI can be subtle and detection requires a high index of suspicion and a regimented evaluation process. This study was done to define the proportion of patients with a possible mTBI evaluated for concussion at a high volume urban trauma center. METHODS/STUDY POPULATION: Methods: A prospective cohort of patients was identified using a 3-question screen at the time of triage: did an injury occur; was the mechanism consistent with mTBI; was there a period of altered mental status. Patients who screened positive were thought to meet a minimum threshold for the evaluation of mTBI. Information about mTBI specific evaluation, management, and education was obtained from the patient's charts. RESULTS/ANTICIPATED RESULTS: Results: 38,484 patients were screened over 16 weeks, of whom 453 (1.18%) screened positive for a possible mTBI and did not meet exclusion criteria. In total, 198 patients had documented loss of consciousness, 101 were diagnosed with mTBI, and 49 received mTBI discharge instructions. Overall, 32.5% of included patients had mTBI listed in the differential or as a diagnosis and 32.3% with loss of consciousness received a mTBI diagnosis. DISCUSSION/SIGNIFICANCE OF IMPACT: Conclusions: Many patients with a possible mTBI were not evaluated, managed, or educated for their potential injury. Changes in physicians' approach to mTBI must occur to increase the proportion of patients receiving appropriate evaluation, management, and education. These results define the current reality of mTBI treatment in the Emergency Department and show the need for further experimental studies targeted at physician decision support interventions to improve mTBI care.

2283

Utilization of ClinicalTrials.gov registry to demonstrate the extent of dissemination bias in anesthesiology

Singh Nair, Davis Johns, Ellise Delphin and Jonathan Leff
Icahn School of Medicine at Mount Sinai

OBJECTIVES/SPECIFIC AIMS: The purpose of this study is to evaluate the extent of publication bias in anesthesia and to evaluate the characteristics of studies that are registered and unpublished. METHODS/STUDY POPULATION: We used the advanced search option and the key word "anesthesia" to identify anesthesia related studies in the ClinicalTrials.gov registry. For

https://doi.org/10.1017/cts.2018.310 Published online by Cambridge University Press

the purpose of this analysis we have randomly selected 50% of the anesthesia related studies from the year 2008–2013. We have collected information pertaining to drug/device study, origin, type, design, subspecialty, enrollment target, anesthesia type, and adult/ pediatric, sponsored/ investigator initiated, population studied and start and end date. Studies with an ongoing, terminated, or unknown status were excluded from the analysis. For results, we initially searched the results section associated with each study; also we searched for any publication link at the study result area of the registry. For studies with no results and publication links we searched on PubMed, Google Scholar, and Embase by trial registration number, study title, and investigators name for matching manuscripts. In addition, we also analyzed the proportion of studies with positive and negative conclusions. We used descriptive and univariate statistics to report the results. RESULTS/ANTICIPATED RESULTS: Overall, 5448 studies were identified within the queried timeframe. We have included 2649 studies in our final analysis and detailed analysis were performed for 1778 studies with the status "completed." The mean, standard deviation of subjects enrolled in completed trials was 392.47 ± 6378. Only 162 (9.9%) studies registered were in the pediatric population, and 1616 (90.9%) were in the adult population. Finally, of the reviewed studies, 1486 (83.6%) were investigator-initiated, 207 (11.6%) were sponsored, and 85 (4.8%) were registered as collaborated studies. Among the completed studies only 296 (16.6%) studies posted results to the result section of the registry. Additionally, a link associated with a publication was posted in only 393 (22.1%) of the studies. The proportion of studies with posted results were 208 (14%), 61 (29%) and 27 (31.8%) in investigator-initiated, sponsored, and collaborated studies $p < 0.001$ respectively. In the 1778 studies we reviewed, 954 (53.7%) studies were associated with one publication. In the published studies, 721 (75.6%) studies reported a positive conclusion for their publication. DISCUSSION/SIGNIFICANCE OF IMPACT: Only, 53.7% of anesthesia related studies with a "complete" status in ClinicalTrials.gov were published. Furthermore, investigators fail to fulfill the requirement of making the results available in the results section of the registry. Lack of availability of published literature and the nonavailability of the results from these studies contributes to publication bias and also failure to honor the ethical responsibility of the investigator to share the results of the study with subjects and with the medical community around the world.

2528

Variable utilization of cross-sectional imaging prior to percutaneous peripheral vascular interventions

Nathan K. Itoga[1], Kenneth Tran[2], Vivian Ho[2], Venita Chandra[2], Ronald L. Dalman[2], Edmund J. Harris[2], Jason T. Lee[2] and Matthew W. Mell[2]

[1] Stanford University School of Medicine; [2] Department of Surgery, Division of Vascular Surgery, Stanford University

OBJECTIVES/SPECIFIC AIMS: Reducing radiologic exams has been a focus of cost reduction in healthcare systems. The utility and justification of obtaining cross-sectional imaging (PPCSI) before surgical intervention continues to be evaluated. For peripheral artery disease (PAD) consensus guidelines regarding PPCSI do not exist and may be influenced by patient complexity, variation of disease presentation, and physician preference. The objective of this study was to determine the utility of PPCSI before percutaneous PAD intervention. METHODS/STUDY POPULATION: Patients receiving first-time endovascular revascularization procedure for PAD from 2013 to 2015 were evaluated for PPCSI done within 180 days prior to revascularization. Patient and physician demographics, perioperative characteristics, and disease distribution/severity were evaluated. The primary outcome was technical success defined as improving inflow and/or revascularization of the target outflow vessels to <50% stenosis. RESULTS/ANTICIPATED RESULTS: Of the 348 patients who underwent an attempted revascularization procedure 159 (45.7%) patients underwent PPCSI, including 151 CTA and 8 MRA. Of these, 48% were ordered by the referring provider (84% at an outside institution), and 52% were ordered by the treating physician. PPCSI was performed a median of 26 days (IQR 9-53) prior to procedure. Individual vascular surgeon practice identified PPCSI rates ranging from 31% to 70%. On multivariate analysis chronic kidney disease (OR = 0.35; CI 0.17–0.73) had the strongest effect against of PPCSI, and Inpatient/ED evaluation (OR = 3.20; CI 1.58–6.50), aorto-iliac (OR = 2.78; CI 1.46–5.29) and femoral-popliteal occlusions (OR = 2.51; CI 1.38–4.55) most strongly predicted PPCSI. After excluding 31 diagnostic procedures, technical success did not differ between endovascular procedures with PPSCI (91.3%) or without PPCSI (85.6%), $p = 0.11$. When analyzing 89 femoral-popliteal occlusions, technical success was higher with PPCSI (88%) compared to procedures without PPSCI (69%), $p = 0.026$. DISCUSSION/SIGNIFICANCE OF IMPACT: PPCSI use is influenced by inpatient status, chronic kidney disease, and anatomic consideration. PPCSI was not associated with overall technical success although it appeared beneficial for femoral-popliteal occlusions. Routine practices of ordering of PPCSI may not be warranted when considering technical success but may be important in treatment planning. Further studies are warranted to determine if radiation, cost, and contrast load justify PPCSI.

https://doi.org/10.1017/cts.2018.310 Published online by Cambridge University Press