The association of gastrointestinal symptoms and hypertension in persons living with HIV on HAART

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OBJECTIVES/SPECIFIC AIMS: The advent of Highly Active Antiretroviral Treatments (HAART) has allowed HIV-positive individuals to live longer in recent years. This has resulted in a higher incidence of mortalities occurring in these individuals due to cardiovascular pathologies, as opposed to deaths due to HIV. Even with long-term HAART, persons living with HIV (PLWHIV) still exhibit inflammation, which is associated with deleterious cardiovascular outcomes. PLWHIV on HAART have a higher prevalence of hypertension, which is associated with an increased risk of cardiovascular events. Moreover, chronic inflammation has been shown to be related to the translocation of microbes and endotoxins across the gastrointestinal tract. Such microbial translocation (MT) is increased in individuals with digestive disorders and their associated symptoms (e.g., diarrhea, abdominal pain, and nausea). This study aims to explore the pathologies common to both MT-induced inflammation and cardiovascular symptoms by examining the associations between gastrointestinal symptoms and hypertension in PLWHIV on HAART.

METHODS/STUDY POPULATION: The sample included 351 PLWHIV on HAART. Pre-existing de-identified data were analyzed. Sample demographics included 56.9% African Americans, 41.3% Caucasians, ages 20–66 years (mean age = 43.65 years), 21% female, 89% male, HIV viral load, CD4 counts. Self-reported data from the Symptom Co-Morbidity Questionnaire and Socio-demographic questionnaire were analyzed with SPSS v.24.

RESULTS/ANTICIPATED RESULTS: In total, 86 PLWHIV (24.50%) stated that they have hypertension; 39 subjects (45.3%) reported having diarrhea, 30 subjects (34.8%) reported nausea, and 12 (13.9%) reported constipation and vomiting. Among ethnicities with hypertension and gastrointestinal symptoms, African Americans compared with Caucasians had a higher percentage of diarrhea (28% vs. 17%), nausea (21% vs. 11%), constipation (11% vs. 2%), and vomiting (8% vs. 5%). Women compared with men reported a higher percentage of nausea (28% vs. 24%) and constipation (8% vs. 6%). Men compared with women reported a higher percentage of diarrhea (38% vs. 7%) and vomiting (8% vs. 5%).

DISCUSSION/SIGNIFICANCE OF IMPACT: These data support the need for targeted screening to include both blood pressure and associated gastrointestinal symptoms. Further studies supporting these results may assist practitioners to target treatments that may prevent cardiovascular comorbidities.
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 condyoma 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.

Understanding care delivered to patients with a possible concussion at an urban level 1 trauma center Chet C. Zalesky1, David W. Wright2, Sanam Patel3 and Rachel K. Patzer4
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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.

Utilization of ClinicalTrials.gov registry to demonstrate the extent of dissemination bias in anesthesiology Singh Nair, Davis Johns, Elise Delphin and Jonathan Leff
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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