Medicine and Surgery

Chairs: E Williams and J Williams–Johnson

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Factors associated with virologic non-suppression in people living with HIV at three HIV treatment sites in St Catherine

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Introduction: HIV virologic non-suppression in persons living with HIV (PLHIV) thwarts efforts to improve health outcomes at the individual level and epidemic control at the societal level. This study sought to determine the prevalence of virologic non-suppression and identify the associated factors among patients taking antiretroviral therapy (ART) at treatment sites in the parish of St Catherine, Jamaica.
Methods: A cross-sectional study was conducted involving 283 HIV-infected patients who were on antiretroviral treatment for more than six months in 2015 at St Catherine treatment sites. Patients' medical records were reviewed and interviewer-administered questionnaires were used to obtain sociodemographic, clinical, virologic and adherence to therapy data. Bivariate and regression analyses were performed to determine independent risk factors associated with virologic non-suppression.
Results: The analysis revealed that 36% (n = 102) of the participants were experiencing virologic non-suppression. Independent risk factors associated with virologic non-suppression were: current CD4 count (OR = 10.6; 95% CI = 5.1, 22.4), second line therapy (OR = 2.2; 95% CI = 1.1, 4.4) and self-reported adherence to therapy (OR = 5.3; 95% CI = 2.6, 10.6).
Conclusion: The virologic non-suppression in over a third of the participants in this study warrants attention. Second line treatment, current CD4 count and self-reported adherence were associated with virologic non-suppression. There is a need to improve the management of PLHIV on ART in order to reduce this and minimize HIV disease progression and antiretroviral resistance. Interventions to improve adherence to ART must be improved if Jamaica is to meet the global 95-95-95 target goal required to end the AIDS epidemic.

Keywords: Adherence, antiretrovirals, HIV

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Identification of risk factors for severe lower gastrointestinal bleeding

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Objective: To determine the risk factors for severe lower gastrointestinal bleeding (LGIB) in patients who presented to the University Hospital of the West Indies (UHWI), and to examine the local epidemiological profile of this phenomenon.
Methods: This was a retrospective analysis of the medical records of 140 cases who presented to UHWI between January 1, 2013 and December 31, 2017. Data were extracted from the records of the patients using the International Classification of Disease-10 (ICD-10) code for gastrointestinal haemorrhage. The Charlson Co-morbidity Index was used to condense multiple co-morbidities into a single factor. Severe LGIB was defined as: (a) continued bleeding – patients utilizing two units of packed cell transfusions or a fall of 20% or more in the haematocrit value for the first 24 hours; or (b) recurrent bleeding – quantified by requirement of added packed cell transfusions or continued fall in the haematocrit of at least 20% after 24 hours or hospital re-admission within seven days after discharge. The data were transferred to Stata 2013 version 13.1 and analysed using the Pearson Chi-square test, univariate logistic regression and multivariate logistic regression.
Results: A total of 140 cases were enrolled in the study which showed a female preponderance of 61%. Of these cases, 114 (81%) had a calculated Charlson Co-morbidity Index of two or more. Half of the study population had severe disease. Most patients (87.1%) with severe disease had a co-morbidity index of 2 or more. Non-steroidal Anti-inflammatory Drugs (NSAIDs) were identified in 55% of

the patients who had severe disease. Independent indicators of severity were bloody stool counts of > 3 prior to presentation, Charlson Co-morbidity Index of 2 or more, and recurrent in-hospital bleeding more than 24 hours post-admission.
Conclusion: This study is the first to evaluate potential indicators for severe lower intestinal bleeding in Jamaica. Independent predictors identified were: more than three bloody stools prior to presentation, a Charlson Co-morbidity Index of 2 or more, and recurrent bleeding beyond 24 hours post-admission. These predictors can potentially influence a change in emergency departments' triage policy to identify patients more likely to have continued or recurrent in-hospital bleeding and re-admission, thus ensuring that the limited resources in developing countries such as Jamaica are effectively utilized in managing patients with severe LGIB.

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The prevalence of risk factors for cardiovascular disease in breast cancer patients receiving anthracycline-based therapy at the University Hospital of the West Indies

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Objective: Cardiovascular disease is the most frequent cause of death in survivors of breast cancer. However, no local data explore how common its risk factors are among this population. This study aimed to determine the risk factor profiles for cardiovascular disease and therapy-induced cardiotoxicity in patients with non-metastatic breast cancer who received anthracycline-based therapy. It also aimed to document current cardio-oncology practices in the Oncology clinic at the University Hospital of the West Indies.
Methods: This was a retrospective study reviewing dockets for patients with breast cancer diagnosed between 2006 and 2015 to determine: (a) patient-related risk factors for cardiovascular disease; (b) treatment-related risk factors (anthracycline cumulative dose, chest wall radiotherapy); and (c) measures implemented to offset increased risks.
Results: A total of 284 patients met the study's inclusion criteria. Of the study population, 78% had at least one risk factor for cardiovascular disease. The most common was obesity (42%), followed by hypertension (36%). Among the patients, 25% received chest wall radiation along with anthracycline-based therapy and 5% received trastuzumab therapy. Despite this, it was uncommon for follow-up echocardiograms to be done after treatment (3.87%) and for patient referral for continued cardiac follow-up (5%).
Conclusion: The majority of patients receiving anthracycline-based therapy for non-metastatic breast cancer had at least one baseline risk factor for cardiovascular disease. These patients were also exposed to therapy-induced risk factors with limited interventions to ameliorate the possibility of adverse cardiovascular effects. Adherence to current guidelines is recommended to reduce the cardiotoxic effects of treatment.
Keywords: Anthracycline, breast cancer

(O – 15)
A review of deaths in patients with a diagnosis of venous thrombo-embolism between 2001 and 2010

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Objective: To determine: (a) the number of deaths per 100 admissions in patients with a discharge diagnosis of venous thrombo-embolism (VTE) who were admitted to the University Hospital of the West Indies (UHWI) from January 1, 2001 to December 31, 2010; and (b) whether deaths were more likely in patients with VTE only or in patients with comorbid conditions.
Methods: Data were obtained from the databases of the Records Department of the UHWI. All patients with a discharge diagnosis of VTE from January 1, 2001 to December 31, 2010 were reviewed.
Results: A total of 866 admissions (571 females and 295 males; mean age: 57 years) had a discharge diagnosis of VTE. In 245 admissions, the diagnosis was VTE only; 621 admissions had comorbid conditions. Among the 235 patients who died (147 females and 88 males; mean age: 55 years), 139 were diagnosed with VTE only and 96 had comorbid conditions. Among the 631 patients who were discharged alive (424 females and 207 males; mean age: 56 years), 106 were diagnosed with VTE only and 525 had comorbid conditions. The difference in the means for the age of the patients who died and those who were discharged alive was not significant (p = 0.6). There were approximately 27 deaths per 100 admissions. Death was the outcome in 57% of the patients with VTE only and in 15% of the patients with comorbid conditions. Around 59% of all deaths occurred in patients with VTE only. On Chi-square analysis, patients diagnosed with VTE only were significantly more likely to die on admission: X^2 (1, n = 866) = 151.38, $p < 0.05$. There was no significant difference in the outcomes between males and females: X^2 (1, n = 866) = 0.1947, $p = 0.659$.
Conclusion: There were approximately 27 deaths per 100 admissions in patients with a diagnosis of VTE. Patients admitted with a diagnosis of VTE only were significantly more likely to die than patients with comorbid conditions.

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The burden of chemical burns to society

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Objective: To document the incidence of chemical burn admissions who presented to the University Hospital of the West Indies between 2015 and 2018, and to describe the epidemiology and short-term outcomes of this population (need for surgery, length of stay and cost of admission).
Methods: A retrospective review of the medical records between January 2015 and December 2018 was conducted to gather data. The parameters recorded were: age, gender, circumstance of injury (accidental *versus* assault), anatomical pattern of burn injury, mortality, length of hospital admission, and the associated hospital charges for the first admission.
Results: There were a total of 106 burn admissions in the study period, 24 of which were chemical burn admissions which accounted for 22.6% of all burn admissions. Assault accounted for 52.7% of these chemical injuries. The peak incidence of chemical burns occurred in the age group of 20 to 39 years and that represented 54% of the cases. The majority of the burns were distributed to the face and upper limbs. Forty-eight percent of the chemical burn admissions required surgery as compared to all other burn types, with only 14.2% requiring surgery. The average length of hospitalization was significantly longer for the chemical burn patient compared to the surface area of injury. The average cost of the first admission for a chemical burn was US$1000 compared to that of a burn of another aetiology of US$650.
Conclusion: The incidence of chemical burns has increased when compared to a study conducted from 1998 to 2002. Chemical burns accounted for the majority of cases of burn assault. This might be due to the ease of obtaining the agent and the awareness of the significant facial disfigurement that can result. These injuries require additional surgical procedures when compared to other aetiologies of burns. This creates a significant societal burden due to direct medical costs, loss of productivity, and social and emotional distress. In other countries, the passage of specific legislation has acted as a deterrent; similar laws need to be implemented in Jamaica.