Session I

Clinical Epidemiology and Quality of Life

Chair: M Tulloch-Reid

(O – 01)

Epidemiological characteristics and antibiotic susceptibility of *Enterococcus* species isolated at the University Hospital of the West Indies in 2018

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Objective: To determine the epidemiological characteristics and antibiotic susceptibility of *Enterococcus* species at the University Hospital of the West Indies in 2018.
Methods: Data obtained from the Laboratory information system (LIS) were used for retrospective analysis of all clinical samples sent to the microbiology laboratory at the University Hospital of the West Indies between January and December 2018. The data were de-duplicated to determine the epidemiologic distribution and antibiotic susceptibility patterns of the *Enterococcus* spp isolated with the help of WHONET 5.6 surveillance system. These samples were processed using standard laboratory methods for culture and susceptibility testing.
Results: A total of 28 978 samples were received by the laboratory in 2018, with 590 (2%) being *Enterococcus* spp isolated from 430 patients. Most of these isolates were from female patients (52%) and the elderly (41%; age > 64 years). Urine specimens accounted for 47% of isolates. The second leading source of *Enterococci* was blood (17%). All *Enterococci* were susceptible to linezolid, rifampin, tigecycline and chloramphenicol while only 98% were susceptible to nitrofurantoin and 59% to gentamicin. All *Enterococci* were resistant to the fluoroquinolones, and 1% were vancomycin-resistant. The majority of vancomycin-resistant *Enterococci* (VRE) were isolated from urine (75%), and 25% of VRE were isolated from blood. All VRE isolates showed 100% susceptibility to ampicillin.
Conclusion: Infection prevention and control measures had likely contributed to low prevalence rates of VRE (1% in 2018 *versus* 4% in 2017). Fluoroquinolones have lost efficacy for treating enterococcal urinary tract infections. Ongoing surveillance of enterococcal susceptibility patterns is thus warranted.

(O – 02)

The relationship between self-management, health-related quality of life, and stigma in adults with sickle cell disease in Jamaica and the United States of America

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Background: Sickle cell disease (SCD) is the most common genetic blood disorder in the United States of America (USA) and Jamaica. It is associated with debilitating complications, poor quality of life (QoL) and significantly shortened lifespans. Sickle cell disease requires complex self-management. The study aimed to explore relationships between perceived stigma, demographic and clinical characteristics, SCD self-management strategies, and QoL in adults with SCD in the USA and Jamaica.
Methods: A convergent parallel mixed methods design was used. Inclusion criteria were > 18 years of age and self-reported diagnosis of a SCD genotype. Interviews (n = 40) about self-management and stigma were conducted. Surveys (n = 100) collected information on health-related QoL [Adult Sickle Cell Quality of Life Measurement Information System (ASCQ-Me)] and stigma [Measure of Sickle Cell Stigma (MoSCS) and SCD Health Related Stigma Scale (SCD-HRSS)]. Regression analyses were used to analyse data. Transcripts were coded and organized into categories.
Results: One hundred individuals participated, with 50 per country (average age = Jamaica: 34.4 $\pm$ 11.4 years, USA: 32.2 $\pm$ 10.7 years; 96% Black). In both countries, low to moderate levels of stigma were reported, except for the MoSCS expected discrimination subscale where participants reported high levels. Explanatory variables in the regression models predicted 9.76–51.88% of variance in scores of QoL outcomes. Being employed and low disease severity were significant predictors for better QoL in both countries. Qualitatively, participants in both countries reported experiencing stigma from varied sources that impacted their ability to self-manage SCD.

Conclusion: Understanding the relationships between these concepts can help researchers develop interventions to mitigate stigma and improve self-management and QoL.

(O – 03)

Oral health-related quality of life in an adult Jamaican population

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Background: Until now, Jamaica had not had a study undertaken that assessed the oral health-related quality of life (OHRQoL) of individuals, to further understand the perceived needs of the population. Therefore, this study aimed to evaluate the OHRQoL in adults in a Jamaican population.
Methods: A total of 120 adults between the ages of 18 and 59 years who presented for treatment at the UWI Mona Dental Polyclinic participated in this cross-sectional study. Participants responded to a structured questionnaire consisting of sociodemographic and oral hygiene habit variables. They were also examined for the presence of decayed, missing and filled teeth (DMFT). Oral health-related quality of life was assessed using the Oral Health Impact Profile (OHIP-14). Descriptive statistical analysis, univariate and multiple Poisson regression with robust variance were performed using SPSS v 21 software.
Results: The mean OHIP-14 score was 9.81 (± 9.06); 24% presented impaired OHRQoL, and 76% presented frequent impaired OHRQoL. The most prevalent domain was physical pain (80%), followed by psychological discomfort (59%), and the mean DMFT score was 9.92 (± 8.78). In the adjusted Poisson regression, participants aged between 29 and 46 years (prevalence ration (PR) = 0.575; 95% CI = 0.367, 0.900; $p = 0.016$) and the use of fluoride toothpaste (PR = 0.517; 95% CI = 0.347, 0.769; $p = 0.001$) were negatively associated with OHRQoL ($p < 0.05$).
Conclusion: Physical pain was the dimension that most impacted OHRQoL. Participants aged between 29 and 46 years and the use of fluoride toothpaste were negatively associated with worst OHRQoL. These findings are important for oral health strategies in this population.

(O – 04)

Cortisol and stress response in Jamaican junior track and field athletes

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Background: Anxiety is modulated by ethnicity. It is associated with an increased release of cortisol. At elevated levels, cortisol influences cognitive functions by altering information processing. The cortisol-anxiety responses in Jamaican athletes have not been determined.
Objective: To evaluate cortisol response to trait anxiety in junior track and field athletes.
Methods: Fifty-one Jamaican junior level track and field athletes comprising 26 females (mean age: 15.9 ± 1.0 years) and 25 males (mean age: 16.4 ± 1.7 years) predominately of West African ancestry provided saliva samples for cortisol determination. Participants also completed self-reported measures (Sport Anxiety Scale-2) to determine cognitive and somatic trait anxiety responses on an individual level. All measures were obtained during the same period (9–11 pm) and during the athletic season (September to April). The athletic season consists of a preparation period and a competition period. Measures were collected once during the preparation period and twice in the competition period.
Results: Cortisol level ($p < 0.001$), cognitive anxiety ($p < 0.001$) and somatic anxiety ($p < 0.001$) scores significantly increased across the athletic season ($p < 0.001$). Three levels of cortisol were clearly identified: low (1.7 nmol/L), medium (3.5 nmol/L) and high (8.4 nmol/L). The cortisol levels correlated with cognitive (r = 0.45; $p = 0.01$) and somatic anxiety (r = 0.34; $p = 0.02$) responses.
Conclusion: Jamaican athletes who experienced higher trait anxiety symptoms during competition periods had cortisol levels which exceeded the normal range (< 6 nmol/L at 10 pm quoted for Caucasians).