

## Medicine

Chair: R Wright-Pascoe, M Lawrence-Wright

(O – 01)

**The clinical profile of triple negative breast cancer patients at the University Hospital of the West Indies, Jamaica**

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**Background:** Triple negative breast cancer (TNBC) by definition does not express the hormone receptors estrogen and progesterone and the human epidermal growth factor receptor 2 (HER2). Specific clinico-pathological features have been found to be associated with TNBC including an increased frequency among premenopausal women and those who are of, African descendants. The clinico-pathological profile of these patients in the Jamaican population, remains undefined. This study was performed to examine the TNBC patients seen at the University Hospital of the West Indies (UHWI), Jamaica in order to generate a clinical profile.

**Materials/method:** This was a retrospective study of patients with TNBC managed at the UHWI between January 2010 and December 2014. A number of demographic and clinico-pathological variables were examined including age, body mass index, menopausal status, parity, family history, disease stage, histological subtype and grade and imaging characteristics on mammogram and ultrasound.

**Results:** Ninety patients with TNBC were identified during the period of study but only 72 medical records were found. The mean age was 51.6 years, 66.6% of the patients were overweight or obese, 81.9% were parous and 62.5% had no family history of breast cancer. The study revealed that 58.3% of the patients had an advanced stage at presentation and the most frequent histological subtype was invasive ductal carcinoma not otherwise specified (NOS) (75%) with a modified Scarff-Bloom-Richardson histological grade of 3 in 50%.

**Conclusion:** Triple negative breast cancer patients were most frequently overweight and parous, with an early age at first full-term pregnancy and no family history of breast cancer. They were likely to have lymph node involvement at diagnosis, advanced stage at presentation and a histological subtype of invasive ductal carcinoma with an intermediate to high histological grade.

(O – 02)

**Issues of health literacy in making sense of the mosquito-chikungunya-fever connection: a Jamaican experience**

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**Background:** Chikungunya viral (CHIKV) infections were first reported in the Americas in late 2013 and in Jamaica in mid-2014. The relatively recent introduction of the disease to the Caribbean means that there is just sparse literature to describe various components of this phenomenon. This research sought to explore issues of health literacy in the context of awareness and actions around the transmission, management and prevention of Chikungunya fever among some Jamaican residents and the implications for health promotion.

**Methods:** Forty-two adults aged 30–50 years, who had experienced Chikungunya fever or had one or more family member affected, were purposively recruited to participate in four focus group discussions. Eight of these participants and four others independent of these groups were also interviewed individually to explore feelings about and experiences related to transmission, prevention and management of the disease.

**Results:** Understanding about CHIKV varied and reportedly influenced how individuals responded to public education messages. Subthemes to transmission were, that you ‘catch it’ because it is ‘going around’, it is ‘airborne’ and the authorities are wrongly ‘blaming mosquitoes’. Emerging issues about management of the disease were the ‘inadequacy of the healthcare system’, which in turn fueled the use of ‘home remedies’ and ‘poly-pharmacy’. Prevention was perceived as need for ‘boosting immunity’, taking pain medication prior to infection and to ‘stay away from it’.

**Conclusion:** Poor health literacy in the context of the issues explored was evident. Health promotion strategies must be developed to clarify misconceptions, influence positive attitudes, and help individuals move from apathy to action as part of control measures for mosquito borne diseases.

(O – 03)

**Chikungunya virus infection associated arthralgia one-year post outbreak in adult Jamaicans**

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**Background:** An outbreak of the Chikungunya virus (CHIKV) infection occurred in Jamaica between 2014–2015. The disease is associated with symptoms that include arthralgia. This study seeks to determine the demographic and self-reported clinical characteristics of arthralgia adults one-year post the CHIKV outbreak.

**Methods:** Cross-sectional study of 306 clinic attendees, who had CHIKV, were consecutively enrolled from six Types 3 and 4 health centres in urban and rural areas. Subjects with arthralgic conditions were compared with those reporting no joint pains. Factors associated with moderate – severe arthralgia were determined by multi-variable logistic regression.

**Results:** Seventy per cent of subjects (215/306) reported joint pain one-year after CHIKV outbreak (age:  $47.6 \pm 18.5$  years). Medical consultation (35.8%) and laboratory confirmation (35.8%) were low. Slightly more than one-half of subjects (53.5%) had a pre-existing medical condition. The likelihood of moderate – severe joint pain one-year post CHIKV outbreak was higher among females (OR, 1.97; 95% CI: 1.19 – 3.24) and among subjects with pre-existing hypertension (OR, 5.04; 95% CI: 2.56, 9.95) and arthritis (OR, 6.12; 95% CI: 1.70, 21.99).

**Conclusion:** Arthralgia was an important feature one-year post CHIKV outbreak. These findings have implications for the recognition and management of arthritis.

(O – 04)

**Intra-uterine growth, early life socio-economic status and bronchial asthma among young adults in Jamaica: the Jamaica 1986 Birth Cohort Study**

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**Background:** We evaluated whether infant birth characteristics and maternal socio-economic status (SES) were risk

factors for asthma in Jamaican young adults.

**Methods:** Data from the Jamaica 1986 Birth Cohort Study were analysed. Information on birthweight, birthlength, gestational age and maternal SES (education and occupation) were obtained from the cohort database. Interviewer administered questionnaires were used to collect data on doctor diagnosed asthma and current use of asthma medications. Poisson regression models evaluated associations between early life factors and asthma outcomes, adjusting for potential confounders.

**Results:** Analyses included 791 participants (362 males; 429 females) with mean age of 18.8 years. Prevalence of doctor diagnosed asthma and current use of asthma medications was 20.5% and 5.2%, respectively. There were no significant associations between birthweight or birthlength with either asthma outcome, however, preterm birth was associated with current use of asthma medications (RR 2.3, 95% CI: 1.05, 5.02,  $p = 0.010$ ), adjusting for low birthweight, obesity and family history of asthma. Current obesity (RR 3.19, 95% CI: 1.51, 6.74) and family history of asthma (RR 2.2, 95% CI: 1.2, 4.1) were also associated with current use of asthma medications. In another model, family history of asthma was associated with doctor diagnosed asthma (RR 1.80, 95% CI: 1.32, 2.46), while maternal education was inversely associated with this outcome (RR 0.68, 95% CI: 0.48–0.98 [secondary vs tertiary]; 0.81, 95% CI: 0.47, 1.38 [primary/all-age vs tertiary]).

**Conclusion:** Birth anthropometry was not associated with asthma outcomes among Jamaican young adults, however, preterm birth and family history of asthma were associated with use of asthma medications.

(O – 05)

**An assessment of turnover time for elective surgeries at the University Hospital of the West Indies**

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**Objectives:** To measure the turnover time in the main operating theatre at the University Hospital of the West Indies (UHWI) and record delays of patient flow.

**Method:** An observational study was done on elective lists between March and June 2015. Data were collected on clock times for specific points in a patient's care in the operating theatre. Time intervals were calculated based on these clock times and any delays in these time intervals were recorded. The mean and mode of all the time intervals as well as the delays were calculated using the latest version of SPSS.

**Results:** The mean turnover time for the main operating theatre at the UHWI is 29.7 (SD  $\pm$  14) minutes. The longest turnover time recorded was 72 minutes and the shortest was eight minutes. There was also avoidable delays with first case start times, as most lists were found to be starting

15 minutes late. The delays as well as underused theatre time explained the surgical productivity of 64% despite a fairly good turnover time. Cancellation rates were also noted to be 19%.

**Conclusion:** The mean turnover time in the main operating was 29.7 minutes, which by international standard depicts a moderately efficient operating theatre. Despite this, there is a high cancellation rate as well as a theatre utilization rate of 64% which are signs of a poorly efficient operating theatre.

#### (O – 06)

### Correlation between lumbar facet joint arthropathy on computed tomography in young adults and pelvic incidence, sagittal abdominal diameter, age and gender

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**Objective:** Lower back pain (LBP) is the most common musculoskeletal disorder of industrialized society. Approximately 90% of adults will be affected by LBP during their lifetime. Lumbar facet joint arthropathy (LFJA) is reported to be the cause of chronic LBP in 15–40% of patients. Pelvic incidence (PI) is an anatomic parameter which describes sagittal pelvic alignment; it does not change with position. This study was undertaken to determine the correlation between LFJA at L4/5 and L5 S1 on computed tomography (CT) in young adults and PI, sagittal abdominal diameter (SAD), age and gender.

**Method:** Data were obtained from CT scans of the abdomen performed on persons 18–40 years between the periods January 1, 2016 to March 31, 2016. Patients with congenital abnormalities of the spine or intra-abdominal lesions which altered SAD were excluded. Pelvic incidence and SAD were measured using Osirix DICOM reader. Lumbar facet joint arthropathy was assessed using the Framingham classification. Data were analysed with StatPlus mac for *t*-tests, Spearman's rho, Kendall Tau and Chi-squared test.

**Results:** There were 52 patients, 28 females (mean age 31.8 years) and 24 males (mean age 30.3 years) were included in the study. The difference in the means was not significant ( $p = 0.4$ ). Twenty-nine patients (55.7%), 15 females and 14 males of mean age 34.6 years, mean PI 52.9° and mean SAD 20.5 cm were positive for LFJA. Twenty-three patients (44.3%), 13 females and 10 males of mean age 28.3 years, mean PI 58.1° and mean SAD 21.9 cm were negative; the difference in the means for age was significant ( $p < 0.05$ ). The difference in the means for PI and SAD were not significant ( $p = 0.1$ ) and ( $p = 0.2$ ), respectively. Age showed a moderate positive correlation with LFJ; Spearman's rho (0.48,  $p < 0.05$ ), Kendall's Tau

(0.39). Pelvic incidence and SAD showed no correlation with LFJA; Spearman's rho (0.19,  $p = 0.1$ ) and (0.1,  $p = 0.4$ ); Kendal Tau (0.16) and (0.08), respectively. There was no significant difference in the occurrence of LFJA between the genders (0.3,  $p = 0.9$ ).

**Conclusions:** Lumbar facet joint arthropathy showed moderate positive correlation with age; no correlation with pelvic incidence or sagittal abdominal diameter and no statistically significant difference in the rate of occurrence between the genders.

#### (O – 07)

### Metabolic Syndrome in patients with systemic lupus erythematosus in urban Jamaica

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**Background:** The metabolic Syndrome (MetSyn) defines a group of risk factors involved in developing cardiovascular disease (CVD) and insulin resistance. Several studies have reported an association between systemic lupus erythematosus (SLE) and premature atherosclerosis and it is now widely accepted and established that patients with SLE are at high risk for CVD.

**Objective:** The aim of this case control study was to determine the prevalence of MetSyn as defined by the 2009 harmonising definition among Jamaican SLE patients compared to controls and to determine the frequency and characteristics of the MetSyn; as well as the cardiovascular risk factors in the SLE cohort compared to controls.

**Materials:** One hundred and fifty patients with SLE from the rheumatology clinics in Kingston, Jamaica and 111 age and gender matched controls were included from the orthopaedic clinic. Systemic lupus erythematosus characteristics and CVD risk factors were assessed in SLE patients and controls. Data were analysed using STATA 12.1.

**Results:** Metabolic syndrome was more prevalent among patients with SLE (OR 1.36; 95% CI: 7.73, 23.9;  $p = 0.285$ ) compared to controls. The metabolic Syndrome was more prevalent among patients with SLE who were obese (57.6%,  $p = 0.009$ ) and in SLE patients  $\geq 50$  years old (47.4%,  $p = 0.012$ ).

**Conclusion:** There is a high prevalence of MetSyn among SLE patients in urban Jamaica. The odds of MetSyn is 36% higher among persons with SLE compared to hospital based controls. Findings did not achieve statistical significance possible due to small sample size, further studies should be conducted using community-based controls and larger sample sizes.