Patient Care

Chair: R Wight-Pascoe and T Ferguson

(O – 19)

Cannabis potentiates transient elevation of aspartate aminotransferase in schizophrenia patients prescribed risperidone

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Objectives: To assess the impact of *Cannabis* usage on the hepatic and renal functions in patients treated with risperidone.

Methods: Male subjects, 18–40 years, admitted to the University Hospital of the West Indies psychiatric ward between February and December 2013 and diagnosed with schizophrenia were recruited for the study. Blood samples (5 mL) were collected from each consented patient. Serums were assayed for Δ^9-tetrahydrocannabinol (THC) and carboxylated-THC, liver and renal parameters. Inferential statistical analysis involved non-parametric tests using median (and interquartile range) and Spearman's correlation to examine associations, with $p < 0.05$ considered significant.

Results: Nineteen subjects were assessed, with a median age of 24 (8) years. The majority (n = 11; 58%) were classified as *Cannabis* users (CU) with THC and carboxylated-THC quantified. At baseline, all parameters measured were the same between CU and non-CU except for gamma-glutamyl transferase (GGT) which was significantly higher for CU *vs* non-CU (30.50 (14.25) *vs* 29 (9); $p = 0.016$). Gamma-glutamyl transferase significantly correlated with THC concentration (r = 0.747; $p = 0.033$). All day one parameters were within the normal range except aspartate aminotransferase (AST). By day seven, AST concentrations decreased significantly for both groups ($p = 0.017$) but remained above the upper limits for CU *vs* non-CU (34.5 (20.75) *vs* 18.5 (5.5); $p = 0.009$). Alkaline phosphatase (ALP; $p = 0.041$), bilirubin ($p = 0.028$) and creatinine ($p = 0.017$) decreased significantly but within normal intervals for CU, and total proteins ($p = 0.042$) for non-CU. Baseline ALP significantly correlated with THC concentrations (r = 0.645; $p = 0.032$).

Conclusion: It is apparent that *Cannabis* potentiates AST elevation associated with risperidone administration. Concomitant use may be potentiating any related liver impairment in schizophrenia patients. Further studies are required to clarify the impact of *Cannabis* on common markers of tissue injury.

(O – 20)

The effect of Kinesio Taping on pain and jump performance in club volleyball players with patellar tendinopathy in the Cayman Islands

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Objective: The developers of Kinesio Taping claim that it decreases pain and increases muscle performance, but little justification exists to support this claim. This study examined the effect of Kinesio tape on knee pain and jump performance in club volleyball players with patellar tendinopathy in the Cayman Islands.

Methods: A single group pretest post-test experimental study was conducted. Participants were required to perform three vertical jump tests, first with and then without Kinesio tape; the test sequence was randomized and counterbalanced. Data were analysed using the paired *t*-test. Statistical Package for the Social Sciences (SPSS version 16 for Windows) was used to conduct the analyses.

Results: Thirty-three subjects (13 females, 20 males; mean age 26.9 ± 5 years) participated. Kinesio tape significantly decreased mean pain scores in jump performance from 24.7 ± 17.4 mm to 4.24 ± 6.5 mm on the 100 mm visual analogue scale ($p < 0.001$) and increased jump height from 44.5 ± 8.2 cm to 47.7 ± 7.8 cm ($p < 0.001$).

Conclusion: The findings of this study support the clinical use of Kinesio Taping in decreasing pain and improving jump performance in volleyball players with patellar tendinopathy.

(O – 21)

The socio-economic factors associated with severe acute malnutrition in Jamaica

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Objectives: Severe acute malnutrition (SAM) is an important risk factor for illness and death globally, contributing to more than half of deaths in children worldwide. We hypothesized that SAM is positively correlated to poverty, low educational attainment, major crime and higher mean soil concentrations of lead, cadmium and arsenic.
Methods: We reviewed admission records of infants admitted with a diagnosis of SAM over 14 years (2000–2013) in Jamaica. Poverty index, educational attainment, major crime and environmental heavy metal exposure were represented in a Geographic Information System (GIS). Cases of SAM were grouped by community and the number of cases per community/year correlated to socio-economic variables and geochemistry data for the relevant year.
Results: Three hundread and seventy-five cases of SAM were mapped across 204 urban and rural communities in Jamaica. The mean age at admission was nine months (range 1–45 months) and 57% were male. Severe acute malnutrition had a positive correlation with major crime ($r = 0.57$; $p < 0.001$) but not with educational attainment or the povety index. For every one unit increase in the number of crimes reported, the rate of occurrence of the cases increased by 1.2% [IRR = 1.012 (95% CI = 1.01, 1.015); $p < 0.001$]. The geochemistry data yielded no correlation between levels of heavy metals and the prevalence of malnutrition.
Conclusion: Major crime has an independent positive association with severe acute malnutrition in Jamaican infants. This could suggest that SAM and major crime might have similar sociological origins or that criminality at the community level may reduce income opportunities.

(O – 22)

An intervention to improve the management of dyslipidaemia in primary care in Jamaica; a randomized controlled trial

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Objective: To assess the effectiveness of a provider-based intervention to improve the control of dyslipidaemia among patients attending primary care clinics in the southeast region of Jamaica.
Methods: An audit of 500 records of patients with chronic diseases that attend six randomly selected health centres was conducted. An intervention, comprising feedback from audit, staff training in motivational interviewing, a reminder stamp in patients' records and patient education cards was conducted over 12 months at three designated intervention health centres. All 500 patient records were re-audited one year later. Primary outcome was improved low-density lipoprotein (LDL) control. Within group differences at re-audit were tested using McNemar χ^2 and paired *t*-tests. Differences in lipid control were assessed using mixed effects logistic regression. Multi-level mixed effects analysis of variance models assessed for differential changes in lipid levels from baseline to re-audit.
Results: At baseline, 21.7% of intervention and 14.2% of control patients achieved LDL targets ($p = 0.143$). Patients had a mean of 2.8 clinic visits during the intervention year. At re-audit, mean LDL increased by 0.34 mmol/L in the intervention group ($p < 0.001$) and by 0.15 mmol/L among the controls ($p = 0.19$); mean high-density lipoprotein (HDL) decreased by 0.15 mmol/L in the intervention group ($p = 0.12$) and increased by 0.23 mmol/L ($p < 0.05$) in the controls.
Conclusion: There was no improvement in LDL control at re-audit. Higher priority should be given to management of dyslipidaemia to reduce cardiovascular disease. Local lipid management guidelines should be developed and goals monitored.