2526. Side Effects of Antiretroviral Therapy in Children with HIV in a Referral Center in Mexico

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Background. Human Immunodeficiency Virus infection (HIV) is still a challenge in many parts of the world, mainly in children. In Mexico the infection has been decreasing, however we still have cases, in 2018 we had 40 perinatal new cases reported. The antiretroviral therapy has shown to be effective to control the disease but it is not free of adverse effects, the children with vertical transmission are exposed to many years of the antiretroviral therapy.

Methods. Retrospective, observational descriptive study at Instituto Nacional de Pediatría during 2004–2019. We included every children under 18 years old who received treatment for HIV and had a complete medical record.

Results. We found 61 patients under 18 years that fulfill the data for the analysis. 37 (60%) were male, the mean age at diagnosis of HIV infection was 47 months, the antiretroviral therapy that received 57 patients (93.4%) of the study was zidovudine, lamivudine and lopinavir/ritonavir, only 4 received another therapy: 3 of them received abacavir, lamivudine, and lopinavir/ritonavir and the missing one received abacavir, lamivudine and raltegravir. 43% of the children of our study showed adverse effects after the antiretroviral therapy, the mean time of adverse effects presentation was 37 months after the beginning of the treatment. The most common effect was hypertriglyceridemia with 13 cases, in 2 cases we found hypercholesterolemia in 7 cases, and in both 5 cases, other frequent effects were hepatitis in 5 cases, diarrhea in 4 cases, anemia in 3 cases, vomiting in 3 cases, abdominal pain and night terrors in 2 cases each one. It was necessary the change of the therapy because of adverse effects in 6 cases (9.8%).

Conclusion. Antiretroviral therapy is effective although it has many side effects. We observe that adverse effects are frequent, almost the half, in pediatric population, it depends on the antiretroviral selection, for children we had only a few options because of the little doses they need or the inability to swallow tablets. It’s important to monitor and control all the adverse effects because they increase morbidity and mortality, especially dyslipidemia, that has been associated with cardiovascular risk and it was the most common effect found in our study.

Disclosures. All authors: No reported disclosures.

2527. Improving Care for Adolescents Living with HIV: Evaluating the Impact of Case-based Education

Simi Thomas, Hurst, PhD; Don Blatherwick, MBB; Medscape Education, Oxford, New Jersey

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Background. The CDC estimates that 26% of the approximately 50,000 people newly diagnosed with HIV in 2010 were youth 13 to 24 years of age. Older children and adolescents now comprise the largest population cared for at pediatric HIV clinics.

Methods. To improve HIV/ID specialists’ ability to develop a comprehensive care strategy for adolescents living with HIV, a CME/ABIM MOC/CE certified, case-based, educational program was developed. A series of multiple-choice questions evaluated the application of evidence-based recommendations. A “test then teach” approach elicited cognitive dissonance, with evidence-based feedback provided following each learner response. Educational effectiveness was assessed with a repeat evaluation of new HIV diagnoses were attributed to heterosexual transmission in women aged 15–44, and 9.9% in men aged 15–44.

Methods. PrEP acceptability and barrier surveys were administered to 102 adolescent-parent pairs. The CDC estimates that 26% of the approximately 50,000 people newly diagnosed with HIV in 2010 were youth 13 to 24 years of age. Older children and adolescents now comprise the largest population cared for at pediatric HIV clinics.

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observed in the proportion of HIV/ID specialists who answered all assessment questions correctly (3% pre vs. 68% post; P < 0.0001; V = 0.397). Improvements were also observed in several specific areas of assessment (table). Additionally, 43% of HIV/ID specialists indicated they planned to modify their treatment approach among adolescents as a result of participating in the education.

Conclusion. Participation in this online, interactive, case-based, educational intervention significantly improved HIV/ID specialists’ ability to develop individualized strategies for adolescents living with HIV. These findings highlight the positive impact of well-designed online education.

Assessment of Educational Effectiveness

| Area of Assessment | % relative improvement (of ID specialists selecting the correct response at pre- vs. post-assessment) | P-value for change | Cramer’s V for the magnitude of the change |
|--------------------|-------------------------------------------------|-------------------|------------------------------------------|
| Performing the appropriate evaluation and assessment for an adolescent who is re-entering care and had discontinued antiretroviral (ARV) therapy recently a year prior | 15% improvement (75% vs 60%) | = 0.0005 | V = .148 (Significant) |
| Selecting an ARV regimen informed by prior treatment history, resistance testing results, and current status | 21.5% improvement (36% vs 28%) | = 0.0001 | V = .509 (Extensive) |
| Recognizing that treatment with INSTI-based regimen often results in an initial mild elevation in serum creatinine levels, which plateaus within the first month | 95% improvement (46% vs 90%) | = 0.000 | V = .457 (Extensive) |

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2528. Inflammation and Plasma Selenium and Chromium in Ugandan Children Living with HIV

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Background. Selenium deficiency has been reported to be associated with HIV disease progression and chromium deficiency with insulin resistance and hyperlipidemias. Here, we assessed selenium and chromium status in a cohort of Ugandan HIV+, HIV exposed uninfected (HEU) and children and their associations with markers of systemic inflammation, immune activation, and gut integrity.

Methods. This is a cross-sectional study in HIV+, HEU and HIV unexposed uninfected (HUU) children and adolescents with markers of systemic inflammation, immune activation, and gut integrity.

Results. Of 317 children tested for CMV IgG at 18 months, 215 (67.8%) tested positive. Significantly higher proportions of HUU children had positive CMV serology (82.6%) compared with HEU children (47.4%, P = 0.001; 96.7% of HUU vs. 10.5% of HEU children breastfed. Child CMV infection was not associated with head circumference, weight-for-age, weight-for-height, nor height-for-age z-scores at 24 months. BSHD III scores in receptive and expressive language, fine and gross motor, and cognitive domains at 24 months of age also did not differ by child CMV status.

Conclusion. We observed high rates of CMV seropositivity in 18-month-old children in Botswana with significantly higher CMV seropositivity among HIV+ children likely owing to breastfeeding. Positive CMV serostatus was not associated with child growth or neurodevelopmental outcomes at 24 months.

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2530. TACO Tuesday as a Medical Education Tool

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Background. Novel strategies in medical education including the flipped classroom, test-enhanced learning, and gaming have been proven to be effective for preclinical learners but little is known about their efficacy in post-graduate education. We implemented an educational tool in our Infectious Diseases (ID) Fellowship Training program called TACO (To Assess Cognitive Operations) Tuesday that utilizes aspects of the flipped classroom, test-enhanced learning, and gaming to improve ID fellow engagement, satisfaction, knowledge retention, and board examination preparation in association with a weekly ID core didactic curriculum.

Methods. One to three multiple choice clinical vignettes were emailed to ID fellows the day prior to their weekly didactic lecture. The first fellow to answer all questions correctly was the winner for the week. The correct answer choices along with detailed rationales were distributed to all fellows at the end of the week. After one year of using this educational tool, we surveyed fellows to evaluate its impact on their engagement with the weekly didactic sessions, self-perception of content retention, and sense of preparation for the ID board examination.

Results. We had a response rate of 82% with 9 of 11 fellows polled participating. Of these, 79% felt the educational tool helped improve their engagement with the lectures and half felt it increased overall satisfaction with their educational experience. The majority felt the tool increased content retention and their level of preparation for the ID board examination. Implementation of this tool was associated with a higher mean IDSA in-training examination score compared with scores from the previous year (P = .24).

Conclusion. ID fellows found that an educational tool utilizing a flipped classroom, test-enhanced learning, and gaming in association with a weekly core didactic curriculum increased their engagement, satisfaction, knowledge retention, and board examination preparation. Future studies will investigate the impact of this tool on knowledge retention and ID board examination scores within our institution as well as across institutions.

Disclosures. All authors: no reported disclosures.

2529. Child HIV Exposure and CMV Seroprevalence in Botswana: No Associations with 24-Month Growth and Neurodevelopment

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Session: 266. Medical Education: Medical School to Practice
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Background. There are more than one million international college students in the United States. The University of Southern California hosts about 5,000 Chinese International