

and rilpivirine. The study also revealed higher frequency of vaccine escape gene variants (sT125S, sA128V, sQ129H/R, sT131I, sC137S, sT143M, sD144D/E, sG145R, sT148P) with the majority of them were more prevalent in HBV-HIV co-infected individuals.

Interpretation: The current HIV-1 therapy without considering HBV diagnosis and treatment in Ethiopia is leading to rather emergence of unintended HBV drug resistance and mutant variants which can evade HBV vaccine-induced immunity. We recommend HBV testing and co-management as part of routine HIV care programs for a better ART selection. Relatively high level of HIV-1 non NRTIs resistance profiles were observed and highlight further investigation during HBV co-infection.

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Abstract #: LAN.009

Serum Folate Concentrations, Asthma, Atopy, and Asthma Control in Peruvian Children and Adolescents

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Background: Asthma has become increasingly prevalent in low- and middle-income countries (LMICs). Folate may increase asthma risk through epigenetic mechanisms. Recent research has examined the relationship between folate status and asthma-related outcomes; however, this relationship has not been examined in LMIC settings.

Methods: We analyzed serum folate concentrations in 412 children with asthma and 342 children without asthma from two geographically adjacent communities in Lima, Peru. We assessed atopy, total IgE, pulmonary function, FeNO, and asthma control using the Asthma Control Test (ACT). We defined controlled asthma as ACT score > 19. We conducted longitudinal monthly follow-up of children with asthma (n=412) for 6–9 months and recorded healthcare utilization for asthma. We examined associations between folate and asthma, atopy, pulmonary function, FeNO, total IgE, and odds of one or more emergency visits for asthma during follow-up using multivariable logistic and linear regression.

Findings: Mean serum folate concentration levels were 20.1 ng/mL (SD 4.98) and 21.1 ng/mL (SD 4.93) in children with and without asthma, respectively. Multivariable analysis showed a 10 ng/mL decrease in serum folate was associated with 45% increased odds of having asthma (OR=1.45, 95% CI 1.05–2.02; p=0.03). Atopy was an effect modifier in the folate–asthma relationship; a 10 ng/mL decrease in serum folate was associated with a 2.38-fold increase in odds of asthma among children without atopy (OR=2.38, 95% CI 1.20–4.72; p = 0.01) and 23% increased odds of having asthma in children with atopy (OR=1.23, 95% CI 0.85–1.80; p=0.28). Among children with asthma, a 10 ng/mL decrease in serum folate was associated with 40% decreased odds of controlled asthma (OR=0.60, 95% CI 0.38–0.95; p = 0.03) and 73% increased odds of one or more emergency visits for asthma

during follow-up (OR=1.73, 95% CI 1.05–2.85; p = 0.03). Serum folate levels were not statistically significantly associated with atopy, pulmonary function, FeNO, or total IgE.

Interpretation: Serum folate concentrations were inversely associated with asthma, but this effect was stronger in children without atopy. Among children with asthma, higher serum folate concentrations were positively associated with asthma control. Future studies are needed to better understand possible mechanisms for folate–asthma relationships.

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Evaluation of Self-medication with Antibiotics among Adults in Kosovo

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Background: The practice of using antibiotics without a prescription and antibiotic resistance are related public health problems in developing Eastern European countries. Self-medication with antibiotics is also an important factor driving antibiotic resistance. The aim of the present study was to estimate the prevalence of purchase of antibiotics without prescription and evaluate the knowledge regarding antibiotics among Kosovo adults.

Methods: A questionnaire was developed with validated questions from previous studies to assess level of purchase and use of antibiotics without prescription. The questionnaire was translated into the Albanian Language and then translated back to English to control for possible errors. A group of experts from the WHO office in Kosovo reviewed the questionnaire and it was determined to have face validity. Surveys were self-administered through a web link and were distributed and advertised through social media. Six hundred and sixty three (n= 663) respondents from Kosovo accessed the online link, between June 2016 to July 2016. The study includes data from 425 respondents (253 women/ 172 men, 55.53% were between 25–45 years of age, 34.59% were between 18–25 years, 8.94% were between 45–60 years, and 0.94% were >60 years).

Findings: Out of 425 participants, 249 (59%) self-medicated with antibiotics. The most common reasons for self-administration of antibiotics were sore throat 186(45.70%), cough 30 (7.37%), and pain 29 (7.13%). The antibiotics most frequently used for self-medication were Amoxicillin (41.78%), Amoxicillin/Clavulanic Acid (23.45%), Ampicillin (13.21%), and Ciprofloxacin (5.93%). The major source of self-medication was the pharmacy, where they purchased antibiotics without a prescription (91.56%). 39.23% of them have changed the type of antibiotic during the same treatment, 36.36% of them have changed the dose of the antibiotic when self-treated and 32.91% of them answered to have used the same antibiotic with different brand name at the same time.

Interpretation: The current prevalence of self-medication among adults in Kosovo, the lack of awareness about the risks and the