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HELICOBACTER PYLORI INFECTION IN PRIMARY AUTOIMMUNE ADRENAL INSUFFICIENCY: A CROSS-SECTIONAL ANALYTICAL STUDY

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INTRODUCTION
Helicobacter pylori (H. pylori) is a common infectious bacterium that colonizes the stomach in approximately 50% of the world population. Because of its ability to elicit a chronic immune response in the host, studies have suggested a possible role for H. pylori in the development of various autoimmune diseases. The primary objective of our study was to compare the proportion of H. pylori infection between patients with primary autoimmune adrenal insufficiency and healthy controls. The secondary objectives were to determine the effect of H. pylori treatment on plasma ACTH levels and inflammatory parameters (erythrocyte sedimentation rate, high sensitivity C-reactive protein, and interleukin-6) in patients with primary autoimmune adrenal insufficiency.

METHODOLOGY
A total of 62 subjects (31 cases and 31 healthy controls) were recruited in this study. A patient was diagnosed to have autoimmune primary adrenal insufficiency if he has low serum cortisol, plasma ACTH >100 pg/ml, normal or reduced adrenal volume without calcification on non-contrast computerized tomography scan, and absence of secondary conditions causing adrenal insufficiency. Both the patients and healthy controls underwent a 14C urea breath test for detection of H. pylori infection.

RESULTS
The age, gender, weight, body mass index, and waist circumference were similar across the two groups. The proportion of H. pylori infection was significantly higher in subjects with autoimmune primary adrenal insufficiency 9/31 (29.1%) compared to healthy subjects 2/31 (6.4%) [p = 0.02]. In our study, both H. pylori positive and negative patients had comparable plasma ACTH and inflammatory markers at baseline. Additionally, there was no change in either plasma ACTH or inflammatory parameters after treatment for H. pylori infection.

CONCLUSION
The patients with autoimmune primary adrenal insufficiency have a markedly increased prevalence of H. pylori infection. Future studies are required to look for the cause-and-effect relationship between these two diseases.

KEYWORDS
adrenal, autoimmune, cortisol, Helicobacter pylori, primary

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CUSHING'S SYNDROME FROM CONCOMITANT THERAPY OF RITONAVIR AND FLUTICASONE

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CASE
The most common cause of Cushing's syndrome (CS) is exogenous steroid use. We present a 9-year-old female with CS from a drug interaction between an intranasal steroid (INS) and a protease inhibitor. She was treated for HIV with zidovudine, lamivudine, and lopinavir/ritonavir. At the age of 6.5 years, she had used intranasal fluticasone furoate to control allergic rhinitis. She had poor linear growth and she became extremely short. She has truncal obesity, a moon face, and purplish abdominal striae at the age of nine. The 8 a.m. serum cortisol level was less than 0.05 mcg/dL, with no response to the 1 mcg ACTH stimulation test. Thus, exogenous CS was diagnosed. Ritonavir inhibits the hepatic CYP3A4 isozyme resulting in decreased glucocorticoid metabolism. Interaction between ritonavir and fluticasone was suspected as the cause of CS. After the withdrawal of INS, the clinical features of CS improved. Therefore, children receiving antiretroviral medication should use steroids with caution.

KEYWORDS
Cushing's syndrome, protease inhibitor, ritonavir, fluticasone, HIV