Diagnostic accuracy cohort study and clinical value of the Histoplasma urine antigen (ALPHA Histoplasma EIA) for disseminated histoplasmosis among HIV infected patients: A multicenter study.

*1 Eliminado, 1 párrafo

Abstract

BACKGROUND:
The Histoplasma urine antigen (HUAg) is the preferred method to diagnose progressive disseminated histoplasmosis (PDH) in HIV patients. In 2007, IMMY ALPHA Histoplasma EIA was approved for clinical for on-site use, and therefore useful for regions outside the United States. However, ALPHA-HUAg is considered inferior to the MViista-HUAg which is only available on referral. We aim to evaluate the diagnostic accuracy of ALPHA-HUAg.

METHODOLOGY/PRINCIPAL FINDINGS:
We conducted a multicenter, prospective, diagnostic test study in two secondary and eight tertiary-care facilities in Mexico. We included HIV patient with PDH suspicion and evaluated ALPHA-HUAg diagnostic accuracy using as reference standard the Histoplasma capsulatum growth on blood, bone marrow, and tissue cultures or compatible histopathologic exam (PDH-proven). We evaluated the results of 288 patients, 29.5% (85/288; 95% confidence interval [CI], 24.3-35.1) had PDH. The sensitivity of ALPHA-HUAg was 67.1% (95% CI, 56-76.8%) and the specificity was 97.5% (95% CI, 94.3%-99.1%). The positive likelihood ratio was 27.2 (95% CI; 11.6-74.4). In 10.5% of the PDH-proven patients, a co-existing opportunistic infection was diagnosed, mostly disseminated Mycobacterium avium complex infection.

CONCLUSIONS/SIGNIFICANCE:
We observed a high specificity but low sensitivity of IMMY-HUAg. The test may be useful to start early antifungals, but a culture-based approach is necessary since co-infections are frequent and a negative IMMY-HUAg result does not rule out PDH.

Abstract
Pregnancy is possible in all phases of chronic kidney disease (CKD), but its management may be difficult and the outcomes are not the same as in the overall population. The prevalence of CKD in pregnancy is estimated at about 3%, as high as that of pre-eclampsia (PE), a better-acknowledged risk for adverse pregnancy outcomes. When CKD is known, pregnancy should be considered as high risk and followed accordingly; furthermore, since CKD is often asymptomatic, pregnant women should be screened for the presence of CKD, allowing better management of pregnancy, and timely treatment after pregnancy. The differential diagnosis between CKD and PE is sometimes difficult, but making it may be important for pregnancy management. Pregnancy is possible, even if at high risk for complications, including preterm delivery and intrauterine growth restriction, superimposed PE, and pregnancy-induced hypertension. Results in all phases are strictly dependent upon the socio-sanitary system and the availability of renal and obstetric care and, especially for preterm children, of intensive care units. Women on dialysis should be aware of the possibility of conceiving and having a successful pregnancy, and intensive dialysis (up to daily, long-hours dialysis) is the clinical choice allowing the best results. Such a choice may, however, need adaptation where access to dialysis is limited or distances are prohibitive. After kidney transplantation, pregnancies should be followed up with great attention, to minimize the risks for mother, child, and for the graft. A research agenda supporting international comparisons is highly needed to ameliorate or provide knowledge on specific kidney diseases and to develop context-adapted treatment strategies to improve pregnancy outcomes in CKD women.

Abstract

*Streptococcus pneumoniae* expressing serotype 3 have high virulence and case fatality ratio. Most studies of serotype 3 pneumococci have focused on a single lineage, the widespread ST180. To evaluate the serotype 3 lineages causing infections in Mexico we characterized 196 isolates recovered in 1994-2017. The isolates were mostly susceptible to all antimicrobials tested. A single meningitis isolate was resistant to penicillin and resistance to erythromycin was 5.2%. The isolates represented the widely disseminated clonal complex CC180 (n=140), the unusual CC4909 (n=42), CC260 (n=11), and a few singletons (n=3). CC260 was less frequent among pneumococcal invasive disease isolates than CC180 and CC4909 (p=0.015). There was a decrease of CC4909 (p<0.001) in the post-PCV13 period (2012-2017). The CC4909 isolates were represented mostly by ST1119 (n=40), seemingly having a restricted geographic origin, with isolates in the pubmlst database having been recovered only in Mexico, USA and Germany. Genomic analysis of publicly available genomes showed that ST1119 isolates have less than 32% similarity with ST180 isolates, indicating that these lineages are more separated than revealed by traditional multilocus sequence typing. Considering the suggestions of a lower efficacy of the 13-valent pneumococcal conjugate vaccine against serotype 3, the different dynamics of the two major serotype 3 lineages in Mexico following the introduction of PCV13 should be closely monitored.
Oral acyclovir induced hypokalemia and acute tubular necrosis a case report.

Abstract

BACKGROUND:
Acyclovir is one of the most common prescribed antiviral drugs. Acyclovir nephrotoxicity occurs in approximately 12-48% of cases. It can present in clinical practice as acute kidney injury (AKI), crystal-induced nephropathy, acute tubulointerstitial nephritis, and rarely, as tubular dysfunction. Electrolytes abnormalities like hypokalemia, were previously described only when given intravenously.

CASE PRESENTATION:
A 54 year-old female presented with weakness and lower extremities paresis, nausea and vomiting after receiving oral acyclovir. Physical examination disclosed a decrease in the patellar osteotendinous reflexes (++ /++++). Laboratory data showed a serum creatinine level of 2.1 mg/dL; serum potassium 2.1 mmol/L. Kidney biopsy was obtained; histological findings were consistent with acute tubular necrosis and acute tubulointerstitial nephritis. The patient was advised to stop the medications and to start with oral and intravenous potassium supplement, symptoms improved and continued until serum potassium levels were > 3.5 meq/L.

CONCLUSIONS:
The case reported in this vignette is unique since it is the first one to describe hypokalemia associated to acute tubular necrosis induced by oral acyclovir.
Functional MIF promoter haplotypes modulate Th17-related cytokine expression in peripheral blood mononuclear cells from control subjects and rheumatoid arthritis patients

Abstract
Rheumatoid arthritis (RA) is a chronic inflammatory autoimmune disease characterized by elevated levels of pro-inflammatory cytokines, such as interleukin (IL)-6, IL-17, and macrophage migration inhibitory factor (MIF). MIF induces IL-17 secretion and MIF promoter polymorphisms influence the expression of selected downstream mediators. The aim of this study was to investigate the relationship between known functional MIF haplotypes and Th17-related cytokine secretion profile in peripheral blood mononuclear cells (PBMC) from control subjects (CS) and RA patients stimulated with lipopolysaccharide (LPS) and recombinant human MIF (rhMIF). The -794 CATTSS and -173G > C polymorphisms of the MIF gene were determined by conventional PCR and PCR-RFLP, respectively. The most frequent haplotypes of the MIF polymorphism and PBMC were identified from three subjects homozygous for each haplotype and in both study groups, the PBMC were obtained and stimulated with LPS or rhMIF. The secretion of cytokines related to the Th17 profile was determined by a multiplex immunoassay (MAGPIX). LPS stimulation induced the secretion of cytokines related to the Th17 profile in PBMC from CS and RA patients, whereas, rhMIF only stimulated this response in PBMC from RA patients. PBMC from CS carriers of the MIF 7C haplotype showed more IL-17A, IL-17F, IL-22, and IL-23 secretion than non-7C carriers after LPS stimulation. In the case of rhMIF stimulation, the PBMC from CS carriers of the 7C haplotype secreted more IL-17A and IL-23 than non-7C carriers. In conclusion, genetic variants of the MIF promoter modulate the secretion of cytokines related to the Th17 profile in PBMC from CS inducing a differential response in comparison to PBMC from RA patients.