INFECTION – Clinical Outcomes Studies

PIN1

MALARIA DIAGNOSIS AND TREATMENT PRACTICE FOLLOWING INTRODUCTION OF RAPID DIAGNOSTIC TEST IN SELECTED HEALTH POSTS OF ADAMA WOREDA, EAST SHEWA ZONE, OROMIA REGION,CENTERAL ETHIOPIA

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OBJECTIVES: To assess malaria diagnosis and treatment practices following introduction of rapid diagnostic test in Adama district health posts, central Ethiopia. **METHODS:** A Cross-sectional study was conducted from January 24 to February 9, 2014 among febrile patients, and caretaking health workers to determine the perceptions and practices related to rapid diagnostic tests (RDTs). Moreover, the treatments prescribed were assessed at the selected Health posts. From the total of 37 health posts in Adama district, 10 health posts were selected by simple random sampling technique. All the patients who visited the health posts during the study period and all health service providers working in the selected health posts were included in the study. **RESULTS:** The survey was undertaken at ten health posts which use RDT for parasitological confirmation. Twenty health workers and 104 patients were interviewed at health posts. Eighty three patients (79.8%) were seen in health posts with available parasite based diagnostic test (i.e. RDT)) and 21(20.2%) in facilities without RDT. The overall malaria positivity rate was 48(57.8%). Anti–malaria drugs were prescribed to all 48(100%) patients with positive RDT and to 19(54.3%) of RDT negative patients. Among non-tested patients, anti-malaria drugs were given to 12(57.1%), with a higher prescription rate in health posts without RDTs results. Among 104 patients presenting with fever or history of fever, 64(61.5%) were prescribed with antibiotics and anti-pain. **CONCLUSIONS:** Findings from this study show that over prescription with anti-malarial drugs is common in Adama district health posts. The use of rapid malaria diagnostics was also associated with higher prescription of antibiotics among patients with negative test results. The Adama district health office should provide on job and other capacity building trainings for health workers on RDTs, the diagnosis and management of other causes of fever and the importance of adhering to test results.

PIN2

EFFECT OF TRANSFER FACTOR ON THE REDUCTION OF THE NUMBER OF EPISODES OF RECURRENT INFECTIONS IN ADULT AND PEDIATRIC PATIENTS FROM A MULTICENTRE OBSERVATIONAL STUDY

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OBJECTIVES: To assess the effect of human leukocyte transfer factor for parenteral use (TF) in adult and pediatric patients suffering from cellular immunodeficiency (CID) in whom TF had been indicated for treatment of respiratory and/or urinary tract infections, prostatitis and/or vulvovaginitis episodes. **METHODS:** Observational multicenter retrospective study in subjects being treated with TF in the period from September 2012 to April 2013 in Slovakia. The primary objective was to evaluate the effectiveness by assessment of the number of documented infections over one year since the treatment began as compared to the last year of the pre-treatment period. Moreover, the resource use and QoL assessment was conducted using EQ-5D. **RESULTS:** The sample (98 analyzed patients) in 9 centers was predominantly female (75.5%) and the average age was 46.6, with a range of 7 to 82. The most common recurrent episodes were respiratory tract infections occurring 5 (472/96 with infection) times at average in the year before TF initiation (96 patients), followed by urinary tract infections (n=38) and vulvovaginitis episodes. The significant reduction was observed in all three types of recurrent infections after treatment with TF (prostatitis not analyzed). Respiratory tract infections where reduced from 5 to 2 a year after, in contrast to the period before initiation of TF application ($p<0.001$). Significant reduction was achieved in urinary tract infections and vulvovaginitis episodes ($p<0.001$). Reduction was accompanied by a lower resource use, measured by the need of antibiotics and hospitalizations. The median of parenteral TF doses was 8 injections for a full study period (maximum 2 years). **CONCLUSIONS:** The conducted study showed that leukocyte human TF helps to reduce recurrence of episodes of infections in adult and pediatric patient with CID. Besides clinical and resource outcomes, the contribution of this study is the elicitation of utility values for CID of different severity.

PIN3

SYSTEMATIC REVIEW AND META-ANALYSIS OF EFFICACY AND SAFETY OF SIMEPREVIR AND SOFOSBUVIR FOR HCV GENOTYPE 1 INFECTION

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OBJECTIVES: To evaluate the efficacy and safety of the second-wave direct-acting antivirals simeprevir and sofosbuvir in patients with HCV genotype 1 infection through a systematic review and meta-analysis of randomized clinical trials (RCTs). **METHODS:** Electronic searches were performed in databases MEDLINE, International Pharmaceutical Abstracts (IPA), Cochrane Library, SCIELO and Scopus. Statistical analyses were executed using the software Review Manager version 5.3. **RESULTS:** 774 articles were identified, of which 10 RCTs were selected for data extraction and statistical analysis. Simeprevir 100 mg promoted better RVR and SVR24 Resultsthan placebo, and simeprevir 150 mg was superior to placebo for the following outcomes: RVR, SVR12, SVR24, SVR12 rates according to METAVIR score for the subgroups F0-F2, F3 and F4, SVR12 rates according to HCV genotype for both genotype 1a and genotype 1b, SVR12 rates for HCV genotype 1a without baseline Q80K and SVR12 according to IL28B genotype for CC, CT and TT. More viral relapse events were observed in the placebo group, for both evaluated doses. There were no significant differences for all of the evaluated safety outcomes between the simeprevir 100 mg and the placebo groups, and for almost all evaluated safety outcomes between the simeprevir 150 mg and placebo groups. Sofosbuvir promoted better RVR, SVR12 and SVR24 than placebo. There was no difference in the safety of sofosbuvir and placebo groups for the majority of evaluated outcomes. **CONCLUSIONS:** Our meta-analysis indicates promising efficacy and a good safety profile of simeprevir for both evaluated doses. Data concerning sofosbuvir reveal the benefits of this drug in hepatitis C virus genotype 1 treatment, also in safety terms.

PIN4

ASSOCIATED FACTORS THE VIROLOGIC SUCCESS IN A GROUP OF PATIENTS WITH HUMAN IMMUNODEFICIENCY VIRUS, MANAGED BY A CARE TEAM INTEGRAL, EPS|SURA MEDELLIN 2010-2013

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INTRODUCTION: the probability of occurrence of virological failure in patients diagnosed with HIV in ARV drug treatment of first and second line is 0.15 and 0.46 respectively, produce the emergence of viral resistance, loss of future schemes, increased hospital admissions, disease progression and death. **OBJECTIVES:** To determine the associated factors that explain the virological success and the time needed to reach it. **METHODS:** Type of study: retrospective cohort survival analysis. Type of patients: belonging to EPS|SURA regional Medellin, diagnosed with HIV and exposed to first time antiretroviral therapy. Variables: dependents (virologic success and time required to reach it) and independents (sociodemographic, clinical and pharmacotherapeutic). Analysis:frequencies, summary measures, and Kaplan Meier for the univariate stage, chi square, Student's t test or Mann-Whitney U and Log Rank Test for the bivariate phase, proportional hazards model and multiple logistic regression in multivariate phase. **RESULTS:** 97% of patients achieved virologic success, needed 209 days (SD±10.14). Patients had a 95% probability of achieving virological success in the first 8.5 months. Properly use drugs was associated with a shorter time to achieve virologic success HR 2.68 [1.22-5.90] and a greater number of problems with drugs was associated with a longer time HR 0.60 [0.43-0.83]. **CONCLUSIONS:** virological success was higher than the studies found, which was obtained in a short time and was maintained throughout the observation period. The variables in this study were not associated with virologic success but were associated with a shorter time to reach it.

PIN5

UTILIZACION DE ANTIBACTERIANOS DE USO RESTRINGIDO EN PACIENTES ADULTOS HOSPITALIZADOS EN EL HOSPITAL LAS HIGUERAS - TALCAHUANO

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OBJECTIVOS: Estudiar la evolución del consumo de antibacterianos de uso restringido en pacientes adultos hospitalizados durante el periodo 2005 al 2012, en el hospital Las Higueras de Talcahuano. **METODOLOGÍAS:** Se realizó un estudio retrospectivo durante los años 2005 - 2012, del consumo mensual de antibacterianos de uso restringido. Los antibacterianos considerados fueron clasificados según el sistema ATC/DDD. Se incluyo vancomicina, carbapenémicos (imipenem, ertapenem y meropenem) y cefalosporinas de tercera generación (ceftriaxona, ceftazidima y cefotaxima). Se determinó la densidad de consumo expresado en porcentaje y en términos del número de DDD/100 días-cama-ocupados. La evolución del consumo se determinó calculando diferencia porcentual entre los año 2005 y 2012. La comparación de los consumos se realizó con la prueba t-test. Se consideró diferencias significativas con un nivel de significancia de $p<0.05$. **RESULTADOS:** Ceftriaxona fue el antibacteriano con mayor consumo total (63%) (292,4 DDD/100 días-cama-ocupados) seguido por vancomicina (17%) (77,13 DDD/100 días-cama-ocupados). Por su parte, el servicio de paciente crítico y de cirugía mostraron el mayor consumo de antibióticos, con un total de 150 DDD/100 días-cama-ocupados (54%) y 54 DDD/100 días-cama-ocupados (20%) respectivamente. En relación a la evolución del consumo, se observó un incremento significativo en el consumo de vancomicina (+67%; $p<0,05$), imipenem (+62%; $p=0.004$), meropenem (+84%; $p=0.006$) y ceftriaxona (+44%; $p=<0.05$). **CONCLUSIONES:** El consumo de todos los antibióticos estudiados aumento significativamente, especialmente ceftriaxona, vancomicina y carbapenémicos. La consecuencia de este consumo pudiera significar un aumento de la resistencia bacteriana intrahospitalaria y los costos asociados en la atención de salud, por lo que se sugiere su estudio.

PIN6

DOES USE OF CALCIUM CHANNEL BLOCKERS AFFECT THE RISK OF INCIDENT ACTIVE TUBERCULOSIS DISEASE? A NESTED CASE CONTROL STUDY ON A NATIONAL HEALTH CLAIM DATABASE

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BACKGROUND: It is World Health Organization's Global Plan to eradicate Tuberculosis (TB) disease by the year of 2050, but it is difficult to achieve that goal by the current rate of infection decrease. Our goal is to evaluate whether calcium channel blocker, an existing cardiovascular drug can affect the onset of active TB. **OBJECTIVES:** To evaluate whether the use of different classes of calcium channel blockers (CCBs) affect the risk of incident active tuberculosis disease. **METHODS:** A nested case control study was carried out using the claims data from National Health Insurance Research Database of Taiwan between January 1997 and December 2011. Index date referred to the first date of TB diagnosis. Patients with CCBs exposure were defined by receiving ≧ 7 days of prescription ending in 3 different time frames. Current use refers to prescription that ended within 30 days of the index date. Multivariate regression and a disease risk score (DRS) technique were used to calculate risk of active TB disease. **RESULTS:**