At a positive false rate (FPR) of 5%, specificity for R5-tropic virus was high (range: 93-99.5%) but came at the expense of sensitivity for X4-using virus (range: 36.7%-66.7%). On the other hand, the sensitivity of both genotypic tropism testing and ESTA in predicting virologic response to the CCR5-antagonist maraviroc. The results of each in screening group, a similar proportion of patients achieved a viral load < 50 HIV-1 RNA copies/mL by Week 48. CONCLUSIONS: In these studies, genotypic tropism and ESTA may offer the best measure of diagnostic performance in HIV-1 tropism testing. The results of this review indicate that genotypic sequencing of the V3 loop is as capable of predicting response to CCR5-antagonist therapy as the current diagnostic standard, ESTA. In addition, genotypic tropism was lower than chemokine coreceptor genotyping here set at 5-10%.

Pin3

EVALUATION OF THE RELATIONSHIP BETWEEN VANCOMYCIN TROUGH CONCENTRATION AND CLINICAL OUTCOME IN HOSPITALIZED PATIENTS WITH ORSA BACTEREMIA AND THE RELATIONSHIP BETWEEN VANCOMYCIN TROUGH CONCENTRATION AND NEPHROTOXICITY

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OBJECTIVES: To evaluate the relationship between vancomycin trough concentration and the clinical outcome in hospitalized patients with ORSA bacteremia, and to assess the relationship between vancomycin trough concentration and nephrotoxicity. METHODS: Adult patients admitted to National Cheng-Kung University Hospital during January 20, 2006 and July 31, 2006 and treated with vancomycin for ORSA bacteremia were eligible for this prospective, observational study. On the fourth day after vancomycin use, vancomycin concentration was monitored and blood culture and blood test on day 4, 7, 11, 14, daily highest temperature and other associated data were collected. The primary endpoint was the clinical outcome in change of vancomycin trough concentration. RESULTS: Nineteen patients were enrolled during this period. On day 4, trough concentration of vancomycin was associated with the rate of defer- vescence. The afebrile rate was 85.7% and 33.3% among patients with trough level of above and below 15 µg/mL, respectively (P = 0.05). For the ratio of vancomycin trough concentration to MIC, patients with ratio greater than 10 had a trend of a higher defervescence rate in comparison with those with ratio less than 10 (77.8% vs. 30%, P = 0.07). In addition, nephrotoxicity was found in five patients, but the mean trough concentrations were not significantly different between the nephrotoxic and non-nephrotoxic group. The result of the study shows that higher serum vancomycin trough concentration is associated with the defer- vescence rate on day 4 when vancomycin is used to treat ORSA bacteremia. Be- sides, under the condition of regular therapeutic drug monitoring, the nephrotox- icity during vancomycin therapy doesn’t seem to be associated with trough concentration, but it needs studies with large sample size to evaluate.

Pin4

THE IMPACT OF PHARMACIST-LED ANTIMICROBIAL STEWARDSHIP IN INTENSIVE CARE UNITS IN A REGIONAL HOSPITAL IN TAIWAN

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OBJECTIVES: Large microbial consumption in intensive care units (ICUs) con- tributes heavy health care burden in Taiwan. This study evaluates the short term influence of pharmacist-led antimicrobial stewardship (PLAS) in ICUs. METHODS: A prospective PLAS program was implemented in medical and surgical ICUs, including dose optimization (renal dose monitoring and therapeutic drug monitoring), streamlining or de-escalation of therapy, antimicrobial order forms, and an- timicrobial treatment duration review, which any antimicrobial duration over 7 days was reviewed. Data collection was from October 15, 2011 to December 2, 2011. Patients who admitted to ICU and received at least one parenteral antimicro- bial were included. Outcomes included suggestion implementation rate of phar- macist interventions and cost saving from dose optimization. Feedbacks of non-accepted suggestions were also addressed. RESULTS: Sixty-two (21%) of study population received 88 suggestions. Sixty-two (70.5%) suggestions were imple- mented. The majority of suggestions is duration review (30.7%) followed by stream- lining or de-escalation of therapy (30.6%) and dose optimization (27.3%). There was 76,238 cost saving from renal dose monitoring. Further efforts we can make are found from reasons of non-accepted suggestion. For example, education on pro- phylactic antibiotics and antimicrobial renal dosage adjustment should be provided. Since, we found that prolonged (>3days) post-operation antimicrobial prophylaxis until inserted drainage lumen removed and refusing dose increasing because impaired renal function was expected by doctors. Involvement in multi- disciplinary specialists is required due to denials from no recommendation from infectious disease physicians. CONCLUSIONS: A PLAS efforts rational antimicro- bial utilization and leads to potential reduction in both the incidence of adverse effects and the burden of health care. Through feedback from refused suggestion, however, we found that antimicrobial stewardship should include a multidisciplinary team, especially incorporating with infectious disease physicians.

Pin5

IMMUNE RECONSTITUTION INFLAMMATORY SYNDROME (IRIS) INCIDENCE IN PATIENTS STARTING ANTIRETROVIRAL THERAPY (ART) EARLIER VERSUS LATER DURING TUBERCULOSIS (TB) THERAPY: A SYSTEMATIC REVIEW AND META-ANALYSIS OF COHORT STUDIES

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OBJECTIVES: The optimal timing of initiation of Antiretroviral Therapy (ART) in ART naïve patients with HIV and TB co-infection remains inconclusive. IRIS inci- dence offers the outcomes that we need to consider when making a decision on the time of initiating ART. This study compared the IRIS incidence in patients initiating ART earlier (<2 months after the start of tubercu- lossis therapy) versus later (>2 months after the start of tuberculosis therapy). We also assessed the differences in incidence between resources limited settings (RSLs) and the Non Resources limited settings (NRLs). METHODS: Data for this meta-analysis were extracted from Pubmed/Medline, Embase, Cochrane database of systematic review, Cochrane Central Register of Control- lated Trials, and International Clinical Trials Register Platform (ICTRP) and Google Scholar from year 1996 to 2011. We searched by using a combination of terms: HIV, HIV infections, acquired immunodeficiency syndrome, tuberculosis, TB, HAART, highly active antiretroviral therapy, ART, antiretroviral therapy. Out of the 1330 studies found in the search, five cohort studies met the inclusion criteria. Among the five studies, two were located in RLS and three were located in NRLs. We conducted a meta-analysis of these five studies by using STATA SE version 12.

RESULTS: Meta-analysis results showed that overall, people treated with ART ear- lier during TB therapy had a 12.9% lower risk of IRIS incidence compared to people treated later (RR, 0.871; 95% CI, 0.831-0.912). In addition, the differences of IRIS incidence between early and late arms were significant in both the Resources lim- ited settings (RSLs) and the Non Resources limited settings (NRLs). CONCLUSIONS: Initiating antiretroviral therapy less than 2 months after the start of tuberculosis therapy is associated with a significantly lower risk of IRIS incidence, regardless of the locations.

Pin6

JAPANESE ENCEPHALITIS IN ASIA: CLINICAL BURDEN AND COST-EFFECTIVENESS OF VACCINATION PROGRAM

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OBJECTIVES: To report clinical burden of Japanese encephalitis (JE) in Asia and cost-effectiveness of JE vaccination program. METHODS: Systematic literature searches were conducted using Embase®, MEDLINE®, WHO, and Google scholar platforms to identify relevant studies in patients with JE. Eligibility of trials was assessed by two reviewers with any discrepancy reconciled by a third, independent reviewer. Outcomes included 41 relevant studies. RESULTS: A total of 7,354 cases and 1,039 deaths in Japan, 317 cases and 78 deaths in Thailand, and 72 deaths in China were reported during 2001-2008. Further, in 2009-2011, published JE cases were 665 in Japan, 626 in Thailand, and 328 in China. The incidence of JE in China was reported to be 0.01-1.53 residents/year/100,000. The number of JE cases reported in China, India, Nepal, Sri Lanka, and Bangladesh were 5,000-10,000, 1,500-4,000, 1,000-3,000, 100-200, and 56, respectively. JE caused 12,038 and 2,496 deaths in Southeast Asia and Western Pacific, respectively (2008). The incidence of JE was associated with 491,797 disability-adjusted life years (DALYs) in the South- east Asia and 185,573 DALYs in the Western Pacific region (2004). Four studies out of 59 retrieved, met the eligibility criteria for evaluating cost-effectiveness of JE vaccination. JE vaccination prevented 117 cases and 12 deaths (Vietnam), 103 cases and 23 deaths (Thailand), 420 cases and 105 deaths (China), and 175-316 cases and 65-66 deaths (India). Total savings in the direct medical costs witnessed as a con- sequence of JE vaccination were $51,122 (Vietnam), $58,776 (Thailand), $614,762 (China), and $178,558-$319,627 (India). CONCLUSIONS: JE has lead to significant mortality and morbidity in many JE endemic areas. Existing evidence from cost-effectiveness studies demonstrated that vaccination program markedly re- duced the burden of JE in Asia.