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OBJECTIVES: The aim of the current study is to explore and to observe the impact of cigarette smoking and alcohol use on adverse drug reactions occurrence of antiretroviral drugs among HIV/AIDS patients. **METHODS:** Retrospective analysis of all patients diagnosed with HIV infection and on HAART therapy from Jan 2007 to Dec 2012 was conducted at infections disease department of Hospital Pulau Pinang, Malaysia. Patient socio-demographic details along with clinical features were recorded and the susceptible ADRs were observed during the study period. Data was descriptively analyzed by using statistical package for social sciences (SPSS 20). **RESULTS:** Out of 743 patients that underwent HAART therapy, 314 (42.2%) patients had experienced adverse drug reactions. Out of total included patients 571 (76.8%) were male and 172 (23.1%) were female. Among the patients, 512 (68.9%) were smokers and 340 (45.8%) patients were alcohol users. A total number of 425 (57.2%) adverse drug reactions were recorded of which 269 (63.2%) were reported among smokers and 162 (38.1%) were reported among alcohol users. Univariate analysis indicates a statistical significant relationship between the smoker (p-value =0.009, 95% CI=1.111 – 2.079, Odd ratio= 1.520) and alcohol users (p-value=0.008, 95% CI=1.106 – 1.994, Odd ratio=1.485) with the occurrence of adverse drug reactions on HAART in HIV patients. **CONCLUSIONS:** The study indicates the incidence of adverse drug reactions is significant in smokers and alcohol users on HAART therapy. Patient counselling on avoiding smoking and alcohol consumption can reduce ADRs in patients on HAART therapy.

PIN2

ADVERSE DRUG REACTIONS OF HAART THERAPY AMONG HIV/AIDS PATIENTS TREATED AT INFECTIOUS DISEASE CLINIC

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OBJECTIVES: Current study is aimed to explore and to observe adverse drug reactions occurrence of antiretroviral drugs among HIV/AIDS patients. **METHODS:** An observational retrospective study of all patients diagnosed of HIV infection and on HAART therapy from Jan 2007 to Dec 2012 was conducted at infectious disease department of Hospital Pulau Pinang, Malaysia. Patient socio-demographic details along with clinical features were recorded. The reported ADRs were assessed for causality by using Noranjo's algorithm scale. Data was descriptively analyzed by using statistical package for social sciences (SPSS 20). **RESULTS:** Out of 743 patients that underwent HAART therapy, 571 (76.8%) were male and 172 (23.1%) were female patients. Overall 314 (42.2%) patients had experienced adverse drug reactions. A total number of 425 (57.2%) adverse drug reactions were reported among which 311 (73.1%) occurred in males and 114 (26.8%) in female patients. Lipodystrophy 151 (35.5%) was the most common ADR reported; in male 126 (29.6%) and 25 (5.8%) female patients were recorded. Lipodystrophy was followed by skin rashes 80 (18.8%) that included 56 (13.1%) male and 24 (5.7%) female patients. Anaemia was reported 74 (17.4%), of which 49 (11.5%) observed in male and 25 (5.8%) female patients. A statistical significant relationship on Chi-square test was observed between the gender and the occurrence of adverse drug reactions (p-value =0.002). However on univariate analysis the relationship between ADRs with gender resulted in insignificant value (p-value=0.267, 95% CI= 0.862 – 1.712, Odd ratio= 1.215). **CONCLUSIONS:** The study indicates the incidence of adverse drug reactions is higher in male than in female patients. However, a multicenter study with a large sample size may provide us with better understanding of this relationship.

PIN4

IMPACT OF HEPATITIS B ON HUMAN IMMUNODEFICIENCY VIRUS PATIENTS IN MALAYSIA: A RETROSPECTIVE STUDY

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OBJECTIVES: To assess the prevalence and clinical outcomes of Hepatitis B (HBV) patients co-infected with Human Immunodeficiency Syndrome (HIV) in a tertiary care hospital. **METHODS:** A retrospective cross-sectional study was performed, of HBV positive HIV infected patients following HAART therapy from 2007 to 2012 in Infectious disease Unit, Hospital Palau Pinang (HPP), Malaysia. The demographic and clinical data of the patients was collected retrospectively. The collected data was analyzed with SPSS software (Version 20) to measure the correlation of variables and their infection rates. **RESULTS:** A total of 664 HIV infected patients including 495 (74.5%) males and 169 (25.5%) females with mean age of 40 ± 10.35 years were included in present study. Of these, 86 (13%) were co-infected with HBV. The main race involved in current study was Chinese 455 (68.5%) followed by Indians 88 (13.3%), Malay 83 (12.5%) and minorities 38 (5.7%). The route of transmission was mainly male heterosexual contact 464 (69.9%) followed by homosexual 47(7.1%) and Intra-Venous Drug Users (IVDU) 48 (7.2%). The mean CD4 count, ALT and AST levels in HBV-HIV co-infected patients were 385 ± 148.55, 51.48 ± 39.42, 105.581 ± 38.37 respectively. The co-infection is significantly associated with gender (p = 0.05), and IVDU (p = 0.01). The co-morbidities seen in the present study were Pulmonary Tuberculosis (17.9%), Pneumocystis pneumonia (15.4%), Hyperlipidemia (4.1%), Dyslipidemia (4.1%), Anemia (5.1%), Ischemic Heart Disease (1.8%), Diabetes Mellitus (8.7%), Hypertension (6.9%), Asthma (1.5%), Oral Candiasis (5.6%), Syphillus (4.2%), Liver Cirrohsis (0.6%), Cerebral Toxoplasmosis (1.8%), Virological Failure (0.6%). **CONCLUSIONS:** The overall prevalence of HBV among HIV patients were about 13% in which 74.5% was males while 25.5 % females. Raised levels of liver enzymes and lowered CD4 counts were seen in the co-infected patients. There was a significant correlation between co-infection with HBV among HIV patients depending on different variables.

PIN5

CHRONIC HEPATITIS C PREVALENCE AND ITS CORRELATION WITH CD4 CELLS AND LIVER ENZYMES AMONG HIV POSITIVE PATIENTS: A MALAYSIAN SCENARIO

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OBJECTIVES: To evaluate the occurrence and clinical outcomes of Hepatitis C (HCV) patients co-infected with Human Immunodeficiency Syndrome (HIV) in a tertiary care hospital. **METHODS:** A retrospective study of the patients with clinical histories of HIV co-infection with HCV following HAART therapy in Infectious disease Unit at Hospital Palau Pinang (HPP), Malaysia from the year 2007 to 2012. The clinical and demographic data was collected from patient's records. In present study we analyzed the collected data by using SPSS software (Version 20) to determine the correlation of variables and measure their infection rates in a particular population. **RESULTS:** The study involves a total of 708 HIV infected patients with the mean age of 40 ± 10.17 years together with 541(76.4%) males and 167(23.6%) females. There were 130(18.4%) patients co-infected with HCV. The assigned population involve in current study was Chinese 427(60.3%) followed by Indians 96(13.6%), Malay 151(21.3%) and minorities 34 (4.8%). There were three main modes of transmission including male heterosexual contact 506(71.5%), homosexual contact 47(6.6%) and intravenous drug users (IVDU) 114(16.1%). The mean CD4 count, ALT and AST levels in HBV-HIV co-infected patients were 374 ± 150.65, 64 ± 76.15, 129 ± 61.06 respectively. The calculated result shows the significant association of several factors like sex (p = <0.001), IVDU (p = <0.001) with co-infection of HIV-HCV. The co-morbidities observed in the current study were Pulmonary Tuberculosis (23.6%), Pneumocystis pneumonia (14.4%), Hyperlipidemia (4.4%), Dyslipidemia (3.2%), Anemia (4.5%), Ischemic Heart Disease (2.5%), Diabetes Mellitus (8.2%), Hypertension (6.5%), Asthma (1.4%), Oral Candiasis (5.2%), Syphillus (3.1%), Liver Cirrohsis (1.1%), Cerebral Toxoplasmosis (2.3%), Virological Failure (1.1%). **CONCLUSIONS:** The incidence rate of HCV among HIV individuals were about 18.4% including 76.4% males and 23.6% females. There was a significant correlation between HCV among HIV-positive patients depending on various variables like gender, age, exposure to risk factors. (p< 0.001).

PIN6

EFFECTIVENESS OF HAND HYGIENE PROMOTION IN RELATION TO LEVEL OF INVESTMENT: A SYSTEMATIC REVIEW

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OBJECTIVES: Hand-hygiene amongst health care workers is amongst the most effective measures to reduce health care-associated infections, but compliance is often poor and little is known about the relative effectiveness of interventions to improve it. This study aimed to evaluate the effectiveness of hand-hygiene promotion interventions and to study the association between levels of investment in interventions and improved compliance. **METHODS:** A search strategy was developed and electronic databases searched for studies published before March 2014. Studies failing to meet the Cochrane Effective Practice and Organisation of Care Group (EPOC) inclusion criteria were rejected. Where studies had not used appropriate analytical methods, we re-analysed primary data. Information on resources required for interventions was extracted, and graded into three levels. Random effects meta-analysis was performed on studies considered sufficiently homogeneous with regard to interventions, participants and outcome measures. **RESULTS:** Of 3,725 studies retrieved, 125 met inclusion criteria; 35 of these met EPOC criteria (6 randomised controlled trials (RCTs), 25 interrupted time-series (ITS), 2 controlled trials, and 2 controlled before-and-after studies). In four RCTs, hand-hygiene compliance was the primary outcome. Meta-analysis of these showed the intervention was associated with improved compliance (pooled odds ratio [OR], 1.39; 95%CI, 1.15-1.67, I^2= 80.00%). Of the 13 ITS studies, 12 showed significant stepwise increases in hand-hygiene compliance. All but three of these also showed a post-intervention trend for increasing hand-hygiene compliance. Grouping studies by the level of investment, 22 were graded as resource-intensive while 11 and 2 studies had medium or low levels of investment, respectively. We found no evidence of a relationship between the level of investment and effect size. **CONCLUSIONS:** Hand hygiene promotion has a positive impact on hand hygiene compliance, but evidence that increased investment in hand hygiene leads to larger improvements is lacking. Reporting on resources used for interventions was, however, poor.

PIN7

BURDEN OF VARICELLA IN ASIA-PACIFIC COUNTRIES: A SYSTEMATIC REVIEW AND CRITICAL ANALYSIS

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OBJECTIVES: Varicella is a common, vaccine-preventable illness but its impact on public health in Asia-Pacific countries has received little attention. This study aimed to review the epidemiology and economic burden of varicella in Asia-Pacific countries. **METHODS:** A systematic literature review was conducted using PubMed and government web sites. Outcomes included epidemiology of varicella (incidence, mortality, and complication), vaccination policy and coverage, and varicella-related health care resource utilization and costs. Critical analyses of study quality and data gaps were performed. **RESULTS:** Published data were identified from thirteen countries including Australia, China, India, Japan, Korea, Malaysia, New Zealand, Pakistan, Philippines, Singapore, Sri Lanka, Taiwan, and Thailand. No studies were identified for Indonesia and Vietnam. Publicly funded universal childhood vaccination against varicella has been implemented in Australia, Korea, and Taiwan, while the remaining countries either recommend vaccination for only high-risk