without TDF add-on in the treatment of CHB. METHODS: Analysis population consisted of patients (n=1000; 35% HBeAg-positive, 35 years old) without compensated or decompensated cirrhosis, DC, or hepatocellular cancer (HCC). AVS compared were 1) Ldt 600mg/day; 2) Ldt + add-on TDF 300mg/day when non-response or viral resistance occurs; and 3) LAM 300mg/day (4)LAM + add-on TDF 300mg/day. A decision tree model with 5 parallel pathways for different levels of HBV-DNA was built using TDF interruptions. Selected main and disease outcomes were modeled: 1) 90% and 2) 36.3% 24 week SVR in null and 4.9 log reduction in null responder patients after 14 days of treatment. The RG7227 and RG7128 demonstrated 5.1 log reduction in viral load in treatment naive, matic viral load reduction after 2 weeks of treatment. The combination of PSI-7977 and LAM demonstrated no difference from PSI-7977 alone. Aggregated data were further analyzed to identify predictors of viral breakthrough. Several studies are currently on-going evaluating results as non-interferon based therapy. Goal of this study was to review the clinical and health economic proﬁle of non-interferon based therapies for non-CHB treatment. METHODS: We searched the MEDLINE, and abstracts from AASLD and EASL until May 2011. Studies were selected for clinical trials on direct acting agents for CHB. Primary endpoints reviewed were Sustained Viral Response (SVR). Toxicity was evaluated as secondary endpoint. Aggregated data were further analyzed to understand comparative safety and efﬁcacy. RESULTS: Until May 2011, results of ﬁve eligible HCV clinical trials for interferon free regimens were available. Overall, treatment with combination of protease and polymerase inhibitor showed dramatic viral load reduction after 2 weeks of treatment. The combination of PSI-7977 and PPI-958 showed 93% viral clearance after 14 days (n=16). The combination of RG7227 and RG7128 demonstrated 5.1 log reduction in viral load in treatment naive, and 4.9 log reduction in null responder patients after 14 days of treatment. The combination of BMS-790052 and BMS 650032 showed 36.3% 24 week SVR in null responder patients. One study evaluating VX-222 and Telaprevir combination was discontinued due to viral breakthrough. Several studies are currently on-going whose data would be available in 2011-2012. CONCLUSIONS: Non-interferon based therapies have shown impressive viral load reduction in short term studies. However, more data for SVR, viral breakthrough and resistance is needed to conﬁrm their safety and efﬁcacy in CHC infected population.

PIN9

SYSTEMATIC REVIEW OF NON-INTERFERON BASED REGIMENS FOR CHRONIC HEPATITIS B TREATMENT

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OBJECTIVES: Chronic Hepatitis B virus (CHB) infection is one of the silent global epidemics. The unmet need and disease burden is significant. Our objective was to evaluate the clinical efficacy and safety proﬁle of non-interferon based therapies for CHB treatment. METHODS: We searched the MEDLINE, and abstracts from AASLD and EASL until May 2011. Studies were selected for clinical trials on direct acting agents for CHB. Primary endpoints reviewed were Sustained Viral Response (SVR). Toxicity was evaluated as secondary endpoint. Aggregated data were further analyzed to understand comparative safety and efficacy. RESULTS: Until May 2011, results of five eligible HCV clinical trials for interferon free regimens were available. Overall, treatment with combination of protease and polymerase inhibitor showed dramatic viral load reduction after 2 weeks of treatment. The combination of PSI-7977 and PPI-958 showed 93% viral clearance after 14 days (n=16). The combination of RG7227 and RG7128 demonstrated 5.1 log reduction in viral load in treatment naive, and 4.9 log reduction in null responder patients after 14 days of treatment. The combination of BMS-790052 and BMS 650032 showed 36.3% 24 week SVR in null responder patients. One study evaluating VX-222 and Telaprevir combination was discontinued due to viral breakthrough. Several studies are currently on-going whose data would be available in 2011-2012. CONCLUSIONS: Non-interferon based therapies have shown impressive viral load reduction in short term studies. However, more data for SVR, viral breakthrough and resistance is needed to confirm their safety and efficacy in CHC infected population.

PIN10

CLINICAL AND ECONOMIC BURDEN OF HOSPITAL ONSET HEALTH CARE FACILITY ACQUIRED CLOSTRIDIUM DIFFICILE INFECTION (HO-CHC-CDI) IN EUROPE: A SYSTEMATIC REVIEW

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OBJECTIVES: To describe the clinical and economic burden associated with hospital onset health care facility acquired Clostridium difﬁcile infection (HO-CHC-CDI) in European health care facilities (EHCF). METHODS: A systematic review of the PubMed, EMBASE and infectious disease societies was performed to capture clinical and economic burden of HO-CHC-CDI in Europe. Included studies were published in English between 2000-2010 and had >30 patients with documented CDI acquired/treated in a EHCF. Data collection was completed by three un-blinded reviewers using Cochrane Handbook and PRISMA guidelines. The primary outcomes were mortality, recurrence, length of stay (LOS) and cost related to CDI. RESULTS: We identiﬁed 1138 primary articles and conference abstracts, which were narrowed to 38 and 30 studies, respectively, after applying eligibility criteria. Outcomes data were available from only 14 countries, with 47% of studies from UK institutions. CDI mortality at 30 days ranged from 2% in France to 42% in the UK. Mortality rates more than doubled from 1999-2004, and continued to rise until 2007, when reductions were noted in the UK. Recurrent CDI varied from 1% in France to 36% in Ireland, however, equivalent recurrence deﬁnitions were not used, which affects study outcomes. Median length of stay ranged from 8 days in Belgium to 124 days in the UK. The incremental cost of CDI was £4,577 in Ireland and £13,177 in Germany, after standardization to 2010 GBP. Country-speciﬁc averages, weighted to the population at-risk data for incidence calculations. A costing model, devised using hospitalization data from Ontario, was used to estimate disease-speciﬁc costs. Results are reported for all age groups combined. RESULTS: From 2004–2010, hospitalized pneumonia incidence (cases per 100,000 persons) declined from 3.61 to 3.47, case-fatality rates declined from 12.3% to 11.6%, and average length of hospitalization increased from 9.9 to 10.5 days. Hospitalized meningitis incidence (cases per 100,000 persons) declined from 1.00 to 0.96, case-fatality rates and hospital stay remained at approximately $19,000 for meningitis, and increased from $22,289 to $31,239 for meningitis. Incidence patterns for the three conditions differed by age and gender. CONCLUSIONS: The clinical and economic burden due to all-cause hospitalization pneumonia, meningitis, and sepsis across all ages combined have not demonstrated major reductions during the period reviewed and remain high, particularly for pneumonia. However, the pattern varied by age group. Substantial savings in costs and hospital resources may accompany prevention of these conditions by measures aimed at major underlying causes, such as influenza virus and Streptococcus pneumoniae.

PIN12

Epidemiology, Outcomes, and Costs of Hospitalization Due to Pneumonia, Meningitis, and Septicemia in Canada From 2004 to 2010

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OBJECTIVES: The hospital burden and costs of pneumonia, meningitis, and septicemia remain high. A retrospective database analysis was conducted for years 2004–2010 to study incidence, case-fatality, length of stay, and cost of hospitalization from all-cause pneumonia, meningitis, and sepsis in Canada (excluding Quebec). METHODS: Hospitalizations due to these conditions from 2004–2010 were identiﬁed from a national database in Canada using International Classiﬁcation of Diseases-10 codes. Statistics Canada provided the population-at-risk data for incidence calculations. A costing model, devised using hospitalization data from Ontario, was used to estimate disease-speciﬁc costs. Results are reported for all age groups combined. RESULTS: From 2004–2010, hospitalized pneumonia incidence (cases per 100,000 persons) declined from 3.61 to 3.47, case-fatality rates declined from 12.3% to 11.6%, and average length of hospitalization increased from 9.9 to 10.5 days. Hospitalized meningitis incidence (cases per 100,000 persons) declined from 1.00 to 0.96, case-fatality rates and hospital stay remained at approximately $19,000 for meningitis, and increased from $22,289 to $31,219 for sepsis. Incidence patterns for the three conditions differed by age and gender. CONCLUSIONS: The clinical and economic burden due to all-cause hospitalized pneumonia, meningitis, and sepsis across all ages combined have not demonstrated major reductions during the period reviewed and remain high, particularly for pneumonia. However, the pattern varied by age group. Substantial savings in costs and hospital resources may accompany prevention of these conditions by measures aimed at major underlying causes, such as influenza virus and Streptococcus pneumoniae.

PIN13

Epidemiology of Staphylococcus Aureus Infections in Children: A Literature Review of the Last 10 Years

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OBJECTIVES: To provide an overview of the epidemiology of Staphylococcus aureus (SA) infection in children from North America and Europe. METHODS: A literature review was conducted using Medline and based on 4 different search strategies to focus on a children population from birth to 18 years of age and to identify publications from the last 10 years. RESULTS: A total of 233 abstracts were retrieved, resulting in the selection of 21 publications. Findings suggest increased incidence risk of hospital-acquired (HA) SA infections worldwide over time. For instance in the USA, the increase in the overall incidence of SA infection among children is significant: from 20.8/1000 admissions in 2002 to 35.8/1000 admissions in 2007, as