COST EFFECTIVENESS ANALYSIS OF RIFAXIMIN FOR THE TREATMENT OF ACUTE HEPATIC ENCEPHALOPATHY
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OBJECTIVES: Cirrhosis and its complications, such as hepatic encephalopathy (HE) are the sixth cause of general mortality in Mexico. The objective of this study is to evaluate a cost-effectiveness relationship of medications used to treat hepatic encephalopathy from the perspective of the Mexican Institute of Social Security (IMSS). METHODS: Cost-effectiveness analysis of treatments used for acute hepatic encephalopathy, based in a decision tree model, and considering a temporal horizon of 14 days, from the perspective of public health institutions. Existing relevant therapeutic alternatives were made available at the IMSS and compared with lactulose, L-ornithine L-aspartate (LOLA), neomycin and rifaximin (the new alternative). Proposed effectiveness measures based on available published studies and based on evidence: Percentage of patients with improvement in signs and symptoms of hepatic encephalopathy. Only direct medical costs were considered. RESULTS: Treatment costs for each alternative (1 USD = 13.5 MXN) $: totalized: lactulose US$2594, LOLA US$3327, neomycin US$1301 and rifaximin US $3312. In relation to effectiveness, the percentage of patients who presented improved signs and symptoms for each alternative is as follows: lactulose and LOLA 55%, neomycin 64% and rifaximin 90%. Cost effectiveness ratios are: lactulose US$5991, LOLA US$5995, neomycin US$3130 and rifaximin US$680. The incremental cost effectiveness analysis indicates that LOLA and neomycin are surpassed by lactulose and rifaximin, which are located on the efficiency line. Rifaximin can lessen hospital stay by at least one day and cut down at least one medical consultation. If these factors are taken into account for the sensitivity analysis, rifaximin takes on the lead as dominating alternative. CONCLUSIONS: Rifaximin is a highly cost effective alternative for treating acute hepatic encephalopathy from an institutional perspective in Mexico.

COST UTILITY ANALYSIS OF CERTOLIZUMAB PEGOL VERSUS NATALIZUMAB MAINTENANCE THERAPY FOR CROHN’S DISEASE
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OBJECTIVES: To determine whether certolizumab pegol was a cost-effective strategy compared with natalizumab for patients with moderate to severe Crohn’s disease. METHODS: A Markov model was constructed to simulate the progression of adult Crohn’s patients. Transitions were estimated from published clinical trials of certolizumab pegol and natalizumab. The costs were discounted at 3% over 5 years. The primary effectiveness measurement was quality-adjusted life years. One-way and probabilistic sensitivity analyses were performed by varying the transition probabilities, costs and health state probabilities. RESULTS: The treatment with natalizumab yielded 39.295 more quality-adjusted life years compared with the treatment with certolizumab pegol. The incremental cost-effectiveness ratio was $164,431 per quality-adjusted life year at 5 years. Sensitivity analysis demonstrated that the model findings were robust and remained in the 95% confidence interval of $70,394 - $391,281. As one of the most influential variables, a reduction in the unit price of natalizumab by 13.8% resulted in an incremental cost-effectiveness ratio below $80,000 per quality-adjusted life year. CONCLUSIONS: The treatment with natalizumab yielded more quality-adjusted life years compared with the treatment with certolizumab pegol in moderate and severe Crohn’s patients. However, the cost was considerable.

PHARMACOECONOMIC ANALYSIS OF THE EFFECTS OF SECONDARY BACTERIAL INFECTIONS ON TREATMENT EFFICACY IN COMPLICATED ABDOMINAL INFECTIONS
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OBJECTIVES: We determined results obtained with a “susceptible – infected – susceptible” model (SIS-model) for development of antimicrobial resistance (i.e. reduction of the susceptibility/effectiveness ratio observed with time), for ceftriaxone / metronidazole, ciprofloxacin / metronidazole, and rifampicin / metronidazole. To evaluate the degree of inaccuracy of the results, sensitivity analysis were performed. RESULTS: The mode of starting treatment of CAP combination therapy ciprofloxacin / metronidazole was more expensive ($3153) in comparison with the use of etampen (2860) and ceftriaxone/metronidazole ($2379). The CER established that the mode of starring treatment of CAP with etampen was both more effective and less expensive in comparison with the use of ciprofloxacin / metronidazole. The SIS-model showed that sensitivity to etampen bacterial agent is kept significantly longer then to ceftriaxone / metronidazole and ciprofloxacin / metronidazole (up to 60 month). The analysis of CER, whose cost of treatment of CAP can either be quite high or that health is shown that the strategy using etampen was dominating. CONCLUSIONS: At CAF, such as a secondary peritonitis when the basic activators are Esherichia coli, Klebsiella pneumoniae and Bacteroides Fragilis it is more expedient to begin treatment with etampen.

COST UTILITY ANALYSIS OF INITIATION AND MAINTENANCE TREATMENT WITH ANTI-TNF DRUGS FOR REFRACTORY CROHN’S DISEASE
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OBJECTIVES: Crohn’s disease (CD) is a chronic inflammatory disease of the gastrointestinal tract which can cause abdominal pain, diarrhea and weight loss. Anti-TNF drugs are being used more often and earlier in the disease course of patients with CD who have aggressive disease. However, these medications are quite expensive. The objective of this study is to evaluate the cost utility of two anti-TNF drugs (infliximab, adalimumab) for refractory CD. METHODS: A Markov model was used to estimate the costs and utilities (QALY’s) of three treatments (usual care, infliximab, adalimumab) over a 5 year time horizon. After initial treatment, patients can achieve complete remission, treatment response or remain in a drug refractory health state. Patients achieving remission or response remain at risk of relapse during each 3 month model cycle. Patients in the drug refractory state can either switch therapy, be hospitalised and undergo surgery or have surgery during each cycle. Estimated costs and utility values were then assigned to the various model health states. Model input parameters, including initial response rates, relapse rates and utility values were derived from the published literature. RESULTS: Usual care had both the lowest expected costs ($157,017) and QALYs (2.555), while infliximab had both the highest expected costs ($54,084) and QALYs (2.721). The incremental cost per QALY moving from usual care to adalimumab and from adalimumab to infliximab was estimated to be to be $193,305 and $451,165, respectively. CONCLUSIONS: Based on common willingness to pay thresholds, anti-TNF drugs would not be perceived as a cost effective treatment for refractory CD.

OPEN VERSUS LAPAROSCOPIC PROCEDURES FOR CHOLECYSTECTOMY SURGERY. A COST UTILITY ANALYSIS, UNDER THE BRASILIAN PUBLIC PAYER PERSPECTIVE
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OBJECTIVES: To assess the economic impact of the incorporation of the laparoscopic procedure in terms of costs, QALYs, reduction of the convalescence period and complications rates under the Brazilian public payer perspective. METHODS: An analytic decisional variables, a rul to estimate costs and outcomes of the cholecystectomy surgery comparing the main differences between open and laparoscopic techniques (minimally invasive procedures), based on Brazilian guidelines for HTA (Vianna, 2007). LAP reduces the probability of nosocomial infection (NI) from 8.93% to 2.6% (Broll 2008), the length-of-stay (LOS) from 3 days to 1 day and return to work in 53, sepsis in 4 and deaths in 2. Total costs (including complications and devices) were higher R$ 2,271 for LAP than OP (R$3133 versus R$364), mainly because of the laparoscopic devices’ costs (R$2,385). However, LAP technique allowed the reduction on complication costs in 34% (from R$231 for OP to R$151 for LAP). Due to lower complication rates, LAP showed a 10.08% higher QALY than OP (0.8357 for OP vs. 0.8443 for LAP). In the end, the incremental cost-utility ratio for the incorporation of the LAP procedure was R$20,920 per QALY. CONCLUSIONS: Findings suggest LAP approach to cholecystectomy as a safer and cost-effective choice for cholecystectomy surgery, under the Brazilian public system.

UTILIZATION AND COST OF PEGINTERFERON PLUS RIBAVIRIN COMBINATION THERAPY IN THE MANAGEMENT OF CHRONIC HEPATITIS C VIRUS (C-HCV) IN EUROPE
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OBJECTIVES: To document real-world utilization patterns and costs of peginterferon plus ribavirin combination therapy in the management of chronic hepatitis C virus (C-HCV) in Europe. METHODS: Patient charts from clinics in the UK, France, Germany, Spain, and Italy were retrospectively reviewed by 240 physicians (-48 per