A COST-EFFECTIVENESS ANALYSIS OF ANTICOMBINIC THERAPY OF BLOODSTREAM INFECTIONS TREATMENT IN INTENSIVE CARE UNIT

Objective: According to the recent international data, the incidence of bloodstream cather—associated infections is 3–8% in the structure of hospital—acquired infections in the intensive care units (ICU) and the leading cause of them are Gram positive bacteria (2). The aim of this study was to conduct a comparative analysis of the cost—economic effectiveness of daptomycin (dapto) vs. vancomycin (vanco) usage in treatment of patients with MRSA cather—associated infection in the ICU. METHODS: “Deci—sion Tree” pharmacoeconomic model was built based on results of international clini—cal studies and data of literature on treatment of bloodstream infections in Moscow clinics. Two variants of antibacterial treatment of patients with cather—associated infections differing on starting products (dapto or vanco) were assessed. If the first line of therapy was ineffective, patients switched over to the second line therapy covering resistant strains—meropenem and fluconazole. Direct and indirect medical costs were assessed: cost of antibiotics and additional medical treatment, antibacterial diagnostic, laboratory and cost of bed—days in ICU and therapeutic department. Costs were based on official data on hospital medical service in municipal Moscow clinics and purchasing price on medical products from price list of the biggest Russian pharmaceutic distributors. Clinical recovery was considered as efficacy with the goal to evaluate cost—effectiveness ratio (CER) of two groups (CERdapto and CERVan according—ly). RESULTS: Better clinical efficacy in daptomycin group resulted in lower— needs to change antibiotic in cather—associated infection treatment in the ICU in comparison to vancomycin group. In spite of the higher price of drug, average cost of successfully treated patient by daptomycin (CERdapto) was 227,887 RUR/per in compare with CERVan 235,032 RUR/per. Exchange rate is 1USD = 30 RUR. CONCLU—SIONS: Good cost—effectiveness ratio in comparison to vancomycin supports use of daptomycin as the first line antibacterial therapy in bloodstream cather—asso—ciated infections.

KIOVIG FOR PRIMARY IMMUNODEFICIENCY: REDUCED INFUSION AND DECREASED COSTS PER INFUSION

OBJECTIVES: Kiovig is a new, ready—to—use 10% liquid immunoglobulin preparation that is medically indicated for the treatment of primary immunodeficiency. This study aims to conduct an economic evaluation which compares the intravenous immunoglob—ulmin (IVig) preparations Kiovig, Multigam, and Solobaglobulin from the societal perspective. METHODS: Given that three prospective studies have observed no difference in outcomes, a cost—minimization analysis considered the differences in costs that can arise from these immunoglobulin products. A decision—analytic model simulated immunoglobulin treatment over a one—year time horizon. Cost items included immunoglobulin costs, pharmacy administration and nursing costs, mini—forfait paid for hospital infusion, costs of adverse events, and lost productivity. Cost data were identified from published sources and Belgian hospital administrators, a probabilistic sensitivity analysis assessed the impact of parameter uncertainty. The price year was 2009. RESULTS: Costs per infusion cycle in adult primary immunodeficiency patients were €1,046 (95% confidence interval: €1,006–1,093) with Kiovig; €1,102 (€1,064–1,147) with Multigam; and €1,147 (€1,108–1,193) with Solobag— lobulin. The average cost savings per infusion with Kiovig as compared to Multigam and Solobaglobulin amounted to €36 and €101 per infusion. CONCLUSIONS: Treatment costs with Kiovig were shown to be lower as compared to other IVig in Belgium. Reduced costs per infusion were attributed to lower costs associated with treating adverse events and the opportunity cost of nursing time and time off work for working adults.

KIOVIG IS CHEAPER THAN MULTIGAM IN A COST—EFFECTIVENESS ANALYSIS OF PNEUMOCOCCAL VACCINES IN TAIWAN

OBJECTIVES: To evaluate cost-effectiveness of pneumococcal non-typeable Haemophilus influenzae type B conjugate vaccine (PHiD-CV), 7-valent pneumococcal conjugate vaccine (PCV7), and PCV13 in Taiwan. METHODS: An age—compartmental, deterministic, static cohort model simulated in a 198,733 birth cohort the disease process of invasive disease (ID, meningitis and bacteremia), community acquired pneumonia (CAP), and acute otitis media (AOM) over life-time. The model was developed by GlaSosSmithKline and adapted with local data. For base-case analysis for all vaccines, a 4—door (3—1) schedule was assumed with 95% vaccine coverage. Cost and outcomes were analyzed from healthcare payer perspective with 3% discount rate. Herd protection on ID, limited cross protection against 6A and 19A, minimal estima—tion of NTHi(non—typeable Haemophilus Influenzae) infection rates in ID and CAP were assumed for base case. Costs for PhHID-CV, PCV7 and PCV13 were assumed parity at 3200 New Taiwan Dollar (NTD). Epidemiological and cost data were obtained from local disease burden study. Vaccine efficacy data were obtained from published sources. One way and probabilistic sensitivity analyses were conducted. RESULTS: Compared with PCV7, PhHID-CV is expected to prevent additional cases of 1 ID, 2,291 CAP and 63,597 AOM, with 54% additional quality—adjusted life—years(QALY) gained with total saving of NTD 69,347,211. Compared with PCV13, PhHID-CV is expected to prevent less cases of 4 ID and 264 CAP, but expected to prevent additional 45,111 AOM cases. PhHID-CV is expected to provide additional 181,018 QALY gained with total saving of NTD 14,312,140, or 0.87% of the GTP. Sensi—tivity analyses show the results are most sensitive to the changes of AOM related parameters, but when the AOM related parameters were changed up to +/-20%, PhHID-CV is still cost—saving to PCV7 and PCV 13. CONCLUSIONS: PhHID-CV is expected to provide more QALYS with potential saving of total health care cost.