

COST-EFFECTIVENESS ANALYSIS OF TREATMENTS IN ADULT CANCER PATIENTS WITH LOW RISK FEBRILE NEUTROPENIA IN THAILAND

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OBJECTIVES: The general febrile neutropenia (FN) treatment in cancer patients in Thailand is hospitalized intravenous antibiotics. Clinical evidence indicated the efficacy of oral antibiotic treatment and early hospital discharge in the treatment of FN patients. This study aimed to assess the cost effective treatment strategy for adult cancer patients with low risk FN in Thailand.

METHODS: A decision tree model was constructed to compare 3 strategies: (1) treatment with ceftazidime in hospital (HosIV), (2) treatment with oral amoxicillin-clavulanate plus ciprofloxacin in hospital (HosPO), (3) treatment with oral amoxicillin-clavulanate plus ciprofloxacin and then early discharge in 24-48 hr after observing in hospital (Early D/C). Health care perspective was used; hence, only direct medical costs (drug, hospitalization, out patient visit, and laboratory costs) were included. Cost data were obtained from Lopburi Cancer Center. Outcome was measured as quality-adjusted FN episodes (QAFNE) which considered only 1 FN episode. Effective data were based on literature review. Incremental cost-effectiveness ratio (ICER) was analyzed. A series of one-way sensitivity analyses were performed.

RESULTS: In the base case model, HosPO and Early D/C were cost saving when compared with HosIV. The cost saving was equal to 64,028 and 65,801 THB respectively. Early D/C was the most dominant strategy with lowest cost and highest QAFNE (5,686 THB and 0.63 QAFNE). The result of one-way sensitivity analysis indicated that drug costs, utility for inpatient IV, utility for inpatient oral and utility for early discharge showed the impact on ICER.

CONCLUSIONS: Both HosPO and Early D/C strategies were more cost effective than HosIV in adult cancer patient with low risk FN in Thailand.