Cost-effectiveness analysis of IEV drug regimen versus ESHAP drug regimen for the patients with Hodgkin and Non-Hodgkin’s lymphoma in Iran

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Background: Chemotherapy for lymph node cancer is often composed of several drugs that are used in a treatment program. The aim of this study was to perform a cost-effectiveness analysis of IEV drug regimen (Ifosfamide, Epirubicin and Etoposide) versus ESHAP drug regimen (etoposide, methylprednisolone, high-dose cytarabine and cisplatin) in patients with lymphoma in the south of Iran.

Method: This was a cost-effectiveness analysis conducted in patients who were admitted to hospital in the south of Iran from 2014 to 2017. Using a decision tree model the Incremental Cost-Effectiveness Ratio (ICER) was estimated. A threshold for incremental costs per relapse/readmission avoided was determined by willingness to pay questionnaire administered to cancer patients.

Result: There were 105 people treated for lymphoma patients in the study period and who answered the willingness to pay questionnaire. The average willingness to pay for relapse/readmission avoided was USD 10,000. The results showed that the expected cost was USD 38,926 in the ESHAP arm and USD 33,949 in the IEV arm and the expected effectiveness was 60.1% in the ESHAP arm and 57.8% in the IEV arm. The ICER was USD 216,391 per relapse and readmission avoided which was higher than the threshold of USD 10,000.

Conclusion: According to the results of this study, it is recommended that oncologists use IEV instead of ESHAP in the treatment of patients with lymphoma and because of high costs of IEV drug costs, it is suggested that IEV drugs be reimbursed by insurance.

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