



Cost-effectiveness of presurgical evaluation and surgery in drug resistant epileptic patients in Iran

Hannah Magrouni, Nina Javadian

Department of Neurology, Imam Khomeini Hospital, Iranian Center of Neurological Research, Neuroscience Institute, Tehran University of Medical Sciences, Tehran, Iran

Background: Epilepsy has a prevalence of 0.4 to 1.2 percent worldwide and is a chronic disease. Unfortunately, 30 percent of patients have uncontrolled seizures despite using 2 or more anti-epileptic drugs, these patients will benefit from epilepsy surgery. Epilepsy surgery is under health care coverage in Iran but presurgical evaluations such as video-EEG or intracranial EEG which are used for localization of epileptogenic focus in brain are very expensive and not covered by insurance. So, evaluating the cost-effectiveness of these presurgical evaluations in Iran is needed.

Methods: Twenty-four patient with drug resistant epilepsy whom were hospitalized in LTM ward of Imam Khomeini hospital and were candidate for epilepsy surgery were evaluated in this study. In order to compare their quality of life the SF-36 survey was filled for them prior and 6-12 month after the epilepsy surgery. To evaluate the cost-effectiveness of surgery we used a Marcov model.

Results: There was a substantial decrease in clinical visits, AED use and seizure frequency after the surgery and a significant improvement in their quality of life. Incremental cost-effectiveness ratio (ICER) in different strategies were between 31,188,252 IRR to 396,988,712 IRR.

Conclusion: Gross Domestic Product per capita in Iran is 200,000,000 IRR and we hypothesized that if ICER would be less than 400,000,000 IRR (two-fold the GDP per capita), the procedure will remain cost-effective. In all our strategies the preoperative evaluations and surgery at any age is beneficial and cost-effective.