COST EFFECTIVENESS ANALYSIS OF COMBINATION CEFTAZIDIME-LEVOFLOXACIN AND CEFOTAXIME-ERYTHROMYCIN AS EMPIRIC ANTIBIOTICS OF SEPTIC THERAPY IN INDONESIA

Dika P. Destiani¹, Tiana Milanda¹, Susilawati², Auliya Suwantika¹, Ivan S. Pradipta¹, Eli Halimah¹, Ajeng Diantini¹, Sri A. Sumiwi¹, Ahmad Muhtadi¹, Keri Lestari¹, Rizky Abdulah¹

¹Departement of Pharmacology and Clinical Pharmacy, Faculty of Pharmacy, Universitas Padjadjaran, Indonesia.

²Department of Pharmacy, Hasan Sadikin Hospital, Bandung, Indonesia.

Corresponding author:

Dika P. Destiani, M. Pharm.

Department of Pharmacology and Clinical Pharmacy

Faculty of Pharmacy, Universitas Padjadjaran, Indonesia.

Jl. Raya Bandung Sumedang KM 21, Jatinangor 45363, INDONESIA

Tel and Fax: +62-22-7796200

Email: dikapramita01@gmail.com

ABSTRACT

Pharmacoecomomics study has become an important consideration in the selection of therapy, including in sepsis patients with respiratory infection where selection of empirical antibiotic therapies is needed. This study was to determine the antibiotic combination with the most cost efficient in sepsis patients with respiratory infections at one of the hospital in Bandung, Indonesia. A retrospective, observational, and analytical study was conducted. Data were collected from medical record of sepsis patients with respiratory infection using ceftazidime-levofloxacin or cefotaxime-erythromycin combination as their empirical antibiotic therapy. Direct medical costs were calculated from cost of empirical antibiotics, medical treatment, supporting medical expenses, hospitalization, and administrative costs. Incremental Cost Effective Ratio calculation of cost per life saved for combination of ceftazidime-levofloxacin was 11.280.974 IDR compared to other empirical antibiotics, whereas combination cefotaxime-erythromycin was 1.971.266 IDR compared to other empirical antibiotics. In summary, the results of this study suggest that although direct medical cost of combination ceftazidime-levofloxacin was cheaper, however considering the cost per life saved, combination of ceftoaxime-erythromycin was more cost effective.

Keyword: empirical therapy, cost effectiveness, pharmacoeconomics, sepsis.