ABSTRACT

Drug Utilization Study of Fosfomycin in Brain Tumor Patient With Ventriculoperitoneal Shunt (VP Shunt) (Study at Department of Neurology Dr. Soetomo Teaching Hospital Surabaya)

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Ventriculoperitoneal *shunt* (VPS) is mechanical device that transfer cerebrospinal fluid to other part that has lower pressure, such as peritoneal. Ventriculoperitoneal shunt installation involve large number of neurosurgery procedure that increase chance of infection, therfore prophylaxis and post-opperative antibiotic are required. Fosfomyin is bactericidal agent that well tolerate within long-term usage and has broad-spectrum activity to gram-positive and gram-negative bacteria, include some difficult pathogen to handle, such as methicillin-resistant staphylococcus aureus (MRSA). This study's objective are to observe indication, dose, duration, and interval of fosfomycin administration in brain tumor patients with ventriculoperitoneal shunt at Department of Neurology Dr. Soetomo General Hospital Surabaya, observe relation between clinical and laboratorium data and fosfomycin usage, and identify drug related problem in patient therapy. The study was retrospective using data from patient's medical records from January 1st 2008 until December 31st 2011 and was analyzed descriptively. The result showed that most of brain tumor with VP Shunt occured on patient in the adult age of 21-60 years 65.4%, and was dominated by male 65.4%. Indication, administration route, duration, and interval of fosfomycin administration was accordance with the literature. Adult fosfomycin dose was accordance with the literature, while 1 children patient take subtherapeutic fosfomycin dose. Antibiotics conversion based on microbiology culture showed that 2 of 4 patient obtain inappropriate antibiotic conversion. Identified drug related problem (DRP) in this study were inappropriate indication, subtherapeutic dosage, and drug interaction.

Keyword : Antibiotic, Fosfomycin, Brain Tumor, VP Shunt, Drug Utilization Study (DUS), Infection.