

ABSTRACT

Drug Utilization Study of Diuretics in Children with Hydrocephalus at RSUD Dr. Soetomo Surabaya

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Hydrocephalus is a dynamic imbalance between the production and absorption of cerebrospinal fluid (CSF) which increased the size of the brain intracranial space. Incidence of cases of hydrocephalus is generally described as a bimodal curve which one of the peak is in the age range of children. Treatment of hydrocephalus include medical therapy (diuretics) and surgeries those are endoscopic surgery and shunting.

The purpose of this study was to evaluate utilization of diuretics and identify drug therapy problems (DTP) in children with hydrocephalus through health medical record (RMK) with retrospective method.

Based on the results of observational study in RMK at 2010-2013 periodes, found 17 patients using diuretics therapy. There are three categories of diuretic which is used were manitol (70.6%), acetazolamide (23.5%) and a combination of manitol and acetazolamide (5.9%). Diuretics can be used for pre-op, post-op, and pre & post-op on all types of hydrocephalus, but the reason for the specific use of diuretics may be caused by variations in comorbid diagnoses, clinical data and laboratory data for each patient. Adverse drug reactions are potentially dominant in DTP analysis those are 7 of 17 patients. Monitoring of serum electrolytes such as sodium and potassium is needed because decrease in serum sodium and potassium are potential adverse drug reactions of diuretics.

In general, utilization of diuretics in children with hydrocephalus at RSUD Dr. Soetomo Surabaya is appropriate, but there are no guidelines for the use of diuretics in hydrocephalus patients so diuretics may be included in management therapy for hydrocephalus at Pedoman Diagnosis dan Terapi (PDT) bagian/SMF Bedah Saraf RSUD Dr. Soetomo Surabaya.

Keywords: diuretics, hydrocephalus, children, retrospective study, drug utilization study (DUS).