ABSTRACT

Insulin Use Study in Diabetes Mellitus Patient with Acute Complications of Diabetic Ketoacidosis in Dr. Soetomo Hospital

Diabetic ketoacidosis (DKA) is one of the serious complications of diabetes decompensation and associated with increasing number of morbidity and mortality so that the management of the appropriate therapy is needed. This study was conducted to understand the usage patterns of insulin therapy in the management of DKA. The study was done prospectively in the period of 15 march to 15 june 2011. From 13 patients enrolled in this study majority in the age distribution of ≥ 41 years, and the largest among women (77%). According to the classification or acidosis gradual, 30.7% of patients experienced mild and severe DKA, 38.6% had moderate. Almost patient (92.3%) comes with sepsis. Route of insulin administration and the type of insulin used is rapid intravenous insulin regulation using a short-acting Regular Human Insulin (100%); intravenous insulin pumps use rapid-acting insulin Aspart (7.7%) and short-acting Regular Human Insulin (46.2%); and subcutaneous insulin maintenance use rapid-acting insulin Aspart (7.7%), short-acting Regular Human Insulin (100%), and long-acting Glargine (23.1%). A patient may receive more than one type and route of insulin administration. The dose given depends on the blood glucose level and condition of the patient, but generally the rapid regulation of insulin is given by the formula (n-1)x4 units/h where n is the first number of blood glucose levels. The current study found that administration of insulin causes hypoglycemia (7.7%) and hypokalemia (30.8%). Administration of insulin along with other therapies may also pose potential interactions (23.1%), which need to be cautious. Therefore it is necessary to monitor blood glucose levels and serum electrolytes and the recording was made orderly in the patient medical record. Cooperation between the health care team is required to achieve therapeutic efficacy and outcome expectations.

Keywords: Diabetes Mellitus, Diabetic ketoacidosis, Insulin