

The incidence of hypokalemia in medical patients

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Abstrak

Background: Hypokalemia is one of the most common electrolyte disorders in hospitalized patients. If hypokalemia were found, the underlying cause should be identified and treated. The incidence study of hypokalemia in Indonesia hospitalized patients is rarely reported.

Objective: To investigate the incidence of hypokalemia in medical patients at the medical wards of department of internal medicine Gatot Soebroto Army Hospital.

Method: Patients who required administration of parenteral fluid for various indications, irrespective of diagnosis, length of stay and types of infusion or medications were included in this study. Serum sodium and potassium concentration were checked twice, first at their admission and the second at discharge. The study form contained data record of patient's initials, age, gender, dates of admission and discharge, medical record number, laboratory findings of serum sodium and potassium concentration at admission and discharge.

Result: 103 subjects were enrolled with mean age 49 years old (ratio of female: male = 70:30). Serum sodium concentration at admission and discharged were not significantly different. Incidence of hypokalemia was 26%. Furthermore, serum potassium concentration at admission and discharge showed significant reduction from mean concentration of 4.06 mmol/L to 3.83 mmol/L (with $P=0.02$). The number of patients with hypokalemia increased significantly during hospitalization (from 27 to 45 patients, with $p=0.023$). Additional data showed that the types of infusion solutions given to patients are as follows: ringer's lactate (52 patients), normal saline (22 patients), D5W (20 patients) and asering/ringer's acetate (9 patients).

Conclusion: The incidence of hypokalemia in medical patients at the medical wards of department of internal medicine Gatot Soebroto Army Hospital was 26%. These patients did not have sodium abnormalities. Number of patients with hypokalemia increased during hospitalization. Most infusion solutions administered contain very low concentration of potassium (ringer's lactate and ringer's acetate 4 mmol/L) or no potassium at all (normal saline, D5W).