SciForschen
Open HUB for Scientific Research

ISSN 2470-9956

Journal of Clinical Anesthesia and Management

Editorial Volume: 1.1 Open Access

Hypokalemic Paralysis in Emergency Department –A Case Report

Ali Karakus[1]*, M Murat Celik[2], Veyis Tasin[1], Secil Arica[3] and Oguzhan Ozcan[4]

[1]*Department of Emergency Medicine, Mustafa Kemal University, Turkey*
[2]*Department of Internal Medicine, Mustafa Kemal University, Turkey*
[3]*Department of Family Medicine, Mustafa Kemal University, Turkey*
[4]*Department of Biochemistry, Mustafa Kemal University, Turkey*

***Corresponding author:** Ali Karakus, Emergency Medicine, Faculty of Medicine, Tayfur Ata Sokmen of Medicine, Mustafa Kemal University, Turkey, **E-mail:** drkarakus@yahoo.com

Received date: 24 Nov 2015; **Accepted date:** 26 Nov 2015; **Published date:** 01 December 2015.

Citation: Karakus A, Celik MM, Tasin V, Arica S, Ozcan O (2015) Hypokalemic Paralysis in Emergency Department–A Case Report. J Clin Anesth Manag 1(1): doi http://dx.doi.org/10.16966/2470-9956.e101

Keywords: Emergency department; Hypopotassemia; Paralysis

Hypokalemic (hypopotassemia) periodic paralysis (HPP) is the most common form of periodic paralysis (PP) and may occur as primary and secondary. The primary hereditary form is the most common cause of HPP. A number of conditions can cause secondary HPP. These include: thyrotoxicosis, hyperaldosteronism, renal tubuler acidosis, Licorice overconsumption and inadequate potassium intake or increased potassium excretion. Patients can be presented with muscle weakness, nausea and vomiting due to hypopotassemia. Decreased motor activity and loss of sensation in physical examination and ST-T abnormalities, arrhythmias and U waves can be observed in electrocardiogram (ECG). If the patient is not responsive to oral potassium replacement therapy, intravenous infusion is performed. A diet rich in potassium but poor in salt and carbohydrate, avoiding strenuous exercise and stress are advised to the patients [1-3].

A 35-year-old male presented to emergency department with the preliminary diagnosis of neuropathy. He noticed weakness, tingling and numbness in his upper and lower extremities for one day. His vital signs were within normal limits. Blood pressure was 130/70 mmHg, heart rate was 72 beats per minute and respiratory rate was 12 breaths/min.

Neurological examination revealed muscular weakness with grade 1/5 power in both lower extremities and 2/5 in upper extremities, deep tendon reflexes were normoactive and Babinski reflex was negative. There were no any other significant findings on physical examination. He has no family history or any known disease. Hypopotassemia was the most striking biochemical abnormality (1.8 mmol/L). Other biochemical, hematological and coagulation parameters were within normal limits. The patient had normal sinus rhythm on his electrocardiogram (ECG). An initial oral dose of 2 × 8 mg of potassium citrate plus potassium bicarbonate tablet are administered orally, and repeated after 30 and 60 minutes to treat his hypopotassemia. The patient's symptoms were improved after 2 hours. ECG, rennin aldersteron levels, tyroid tests were repeated in the patient's follow-up and revealed no pathological findings.

Hypopotassemia should be considered in patients who are presented with tingling, numbness and muscular weakness in emergency departments. Lower serum potassium levels can be treated with oral potassium replacement therapy without intravenous potassium infusion.

References

1. Koc F (2008) Analysis of 13 patients with hypokalemic periodic paralysis. Turk J Emerg Med 8: 1-5
2. Celik MM, Karakus A, Zeren C, Demir M, Bayaroğulları H, et al. (2012) Licorice Induced Hypokalemia, Edema And Thrombocytopenia. Hum Exp Toxicol 31: 1295-1298.
3. Korkut S, Kandis H,Günes H, Korkut E (2010) Familial hypokalemic periodic paralysis: A case report. Duzce Medıcal Journal 12: 62-64.