

# A CASE OF HYPOKALEMIA

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**ABSTRACT:** Hypokalemia is the deficiency of potassium in the bloodstream. It is also called as low potassium level. Patients suffer from this deficiency because of inadequate dietary intake of potassium, eating liquorice or caffeine. In this report, a patient with hypokalemia is treated with Injection KCl [potassium chloride] dose: 2amp which should be given in 1pint[473.176millilitres] normal saline but it was given in 100ml normal saline. So, the patient developed hypersensitivity [drug hypersensitivity]reactions and body shivering is observed. As hypokalemia should be treated with potassium supplements mostly through IV[Intravenous]route, proper dose should be given to the patient and proper dose should be given in accurate amount of isotonic saline. If it is not given in accurate doses, it leads to further complications

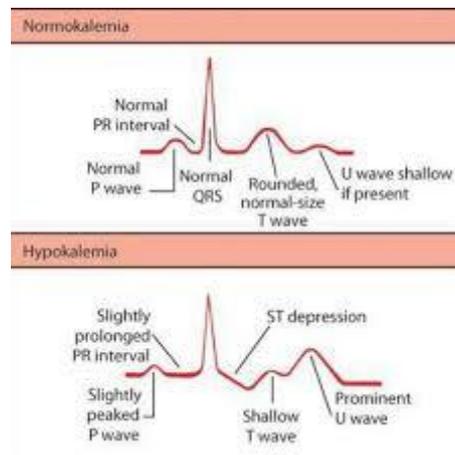
**KEYWORDS:** Hypokalemia, hypersensitivity, accurate doses.

**INTRODUCTION:** Hypokalemia means low level of electrolyte potassium in blood. Normal level: 3.5-5.0 milliEquivalents per liter [ mEq/L ].Common causes of this symptom include inadequate intake of potassium, vomiting, diarrhoea, medication side effects, eating liquorice or caffeine. Early signs of hypokalemia include weakness and fatigue, digestive problems, muscle aches, heart palpitations, tingling and numbness, breathing difficulties, and mood changes. Pathophysiology include inadequate potassium intake, increased potassium excretion, or a shift of potassium from the extracellular to the intracellular space. Increased excretion is the most common mechanism. Diagnosis is done by serum measurement of potassium level. Hypokalemia is treated with oral or intravenous potassium. Accurate doses must be given to reduce further complications. In this report, a patient with hypokalemia is treated with Inj. KCl dose: 2amp which should be given in 1pint[473.176millilitres] normal saline but it was given in 100ml normal saline. So, the patient developed hypersensitivity [drug hypersensitivity]reactions and body shivering is observed. So, accurate dose should be given in accurate amount of isotonic saline. If not given in accurate doses, it leads to further complications.

## CASE REPORT:

### CASE:

A female patient of age 30years was admitted to a local hospital with chief complaints of weakness of both lower limbs and weakness of left upper limb, fever, unable to walk.. On physical examination, the patients blood pressure was 120/80mmHg, Fever- 98.4degree Fahrenheit, pulserate-73beats/min, Respiratory rate-22/min. Laboratory tests were as follows: Haemoglobin was 14.0gms%, RBC: 4.6mill/cumm, WBC:5000/cumm, Neutrophils:3800/mm3, Lymphocytes:1690/mm3, Esinophills:00/mm3, Monocytes:420/mm3, Basophills:00/mm3, RBC: Normocytic/Normochromic, Platelet count: 2.4lacs/mm3. Serum electrolytes: Sodium: 141mmol/L, Potassium: 2.7 mmol/L, Chloride: 109mmol/L. ECG: peaked T waves. Diagnosis is done based on ECG and Potassium levels.The patient was hospitalised with the diagnosis of Hypokalemia and was treated with standard therapy.

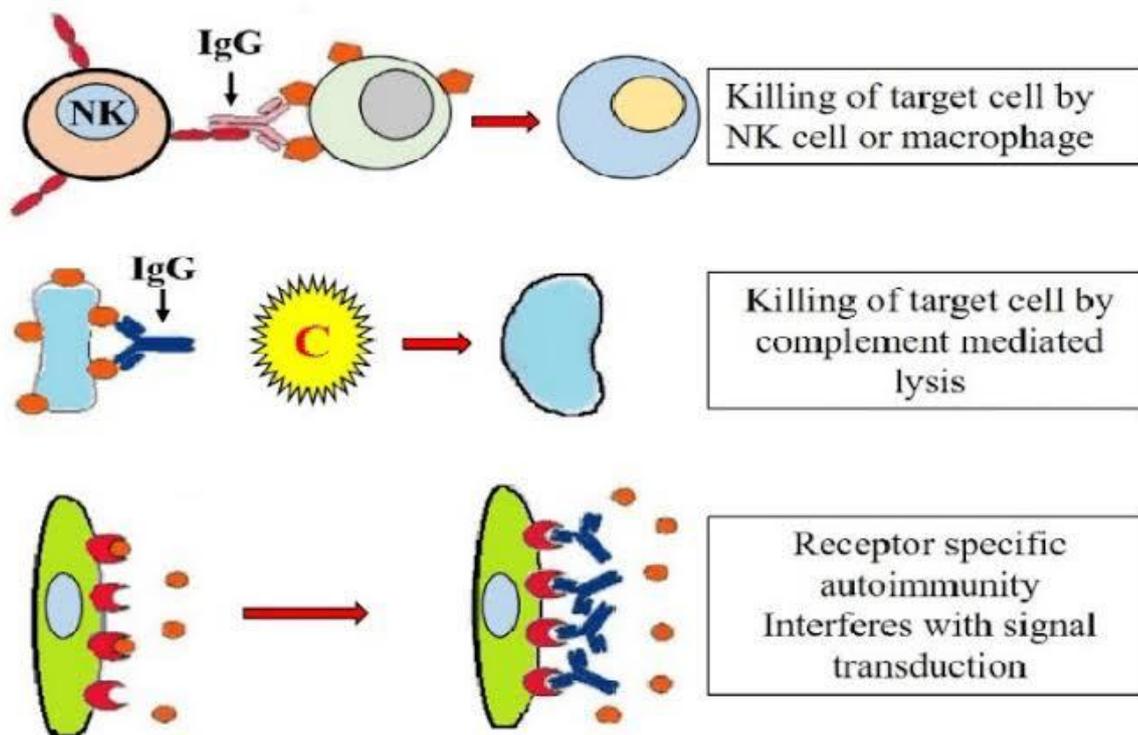


Injection Zostum{ceftazidime} [cephalosporin antibiotic] of dose:1gram was given intravenously twice daily. Injection Pantoprazole [antacid] of dose 40mg was given intravenously once daily. Tablet Dolo [paracetamol] of dose 650mg was given orally thrice daily. Tablet Beplex Forte which contains Thiamine mononitrate, Riboflavin, Nicotinic acid, Niacinamide, Pyridoxine, Calcium pantothenate, Folic acid, Vitamin B12 and Vitamin C was given once daily. Injection KCl of dose 2amp was given in 100ml normalsaline which is to be given in 1pint[473.176millilitres] normal saline. These are the medications given on day1. The Injection KCl of dose 2amp should be given in 1pint[473.176millilitres] but it was given in 100ml of normal saline. So, the patient developed hypersensitivity[drug hypersensitivity] reactions and body shivering was observed. After 3hours of administration of Injection KCl, then the error was noticed and immediately the drug [Injection KCl 2amp] was given in 100ml normalsaline and the patient condition was normalised after a period of 2 hours. In this case, a medication error is there which should be reported to prevent such errors.

### **DISCUSSION:**

Hypokalemia is defined as low level of electrolyte potassium in blood. Normal levels: 3.5-5.0 milliEquivalents per litre[mEq/L]. Common causes of this symptom include inadequate potassium, vomiting, diarrhoea, medication side effects, eating liquorice or caffeine. Early signs include weakness and fatigue, digestive symptoms, muscle aches, heart palpitations, tingling and numbness, breathing difficulties and mood changes. Pathophysiology include inadequate potassium intake, increased potassium excretion, or shift of potassium from the extracellular to intracellular space. Increased excretion is the most common mechanism. Diagnosis is done by serum measurement of potassium level. Hypokalemia is treated with oral or intravenous potassium. Accurate doses must be given to reduce further complications. In this report, a patient with hypokalemia is treated with Inj. KCl dose: 2amp which should be given in 1pint[473.176millilitres] normal saline but it was given in 100ml normal saline. So, the patient developed hypersensitivity reactions and body shivering is observed. Hypersensitivity reactions: refers to excessive, undesirable[damaging, discomfort-producing and sometimes fatal] reactions produced by the normal immune system.This is known as drug hypersensitivity. It means they are drug induced immune and unflammatory reactions. Shivering : shaking slightly and uncontrollably. So, accurate doses must be given in accurate amount of isotonic saline. If not given in accurate doses, it leads to further complications. . In

this case, a medication error is there which should be reported to prevent such errors.



#### CONCLUSION:

Although Hypokalemia is a well known condition and can be curable, improper dosing may lead to complications and additional morbidity. A prompt treatment with accurate dose prevent from complication and also help in speedy recovery of the patient.

#### ABBREVIATION:

KCl: Potassium chloride

#### CONFLICT OF INTERESTS:

None

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