Upper and lower extremity paralysis: A case report

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Case Presentation: A 31 year old Hispanic male arrived to Emergency Room by Emergency Medical Service with complaint of lower and upper extremities weakness that started about 5 days prior to admission, which progressively worsened. On the day of admission, he was unable to ambulate. Apart from the weakness the patient denied dyspnea, fever, neck pain, no recent history of travel with no recent upper respiratory infection or gastrointestinal infection or sick contacts. His past medical history includes Grave's disease which was previously treated with methimazole but he discontinued the medication a few weeks ago. Patient denied any recreational drugs, over the counter medications, prescription medications including laxatives or diuretics. He did however admit to recent tobacco abuse.

Discussion: One of the main goals of medical management is to replenish the potassium levels as imbalances in potassium can lead to arrhythmia and cardiovascular complications. Potassium chloride is a good choice for supplementation and is dosed between 40 and 200 mmols. Judicious replacement of potassium is necessary as rebound hyperkalemia is a common problem because potassium can undergo a transtheoretic shift from extracellular to intracellular space. Oral or IV preparations of propranolol are beneficial in aiding in potassium homeostasis. Nonspecific beta antagonistic properties of propranolol allow for increase in potassium levels and resolve the paralysis without the rebound effect of hyperkalemia. Oral propranolol can be dosed at 60 mg every six hours.

Conclusion: There is much other differential diagnosis that could present with lower extremity weakness such as Guillain-Barre syndrome, meningitis, medication side effects or even malignancy. But HPP is one of the diagnoses often missed due to its low occurrence. The combination of paralysis with hypokalemia should prompt to any physician the possibility of this disease. The prompt diagnosis of this condition will help to avoid expensive laboratory studies and invasive procedures. It will also help to soon provide the patient with the appropriate treatment such as moderate potassium replacement in addition with propranolol to correct the hypokalemia, thus improving the extremity weakness.

Biography
Nimat Alam is a Physician associated with Family and Community Medicine at Texas Tech University Health Sciences Center. Her specialization is with geriatrics, clinical expertise include diabetic care, geriatric medicine, hospital medicine, nursing home ambulatory procedures and preventive medicine.

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