



REVIEW ARTICLE

HYPERTHYROIDISM PRESENTING AS HYPOKALEMIC PERIODIC PARALYSIS IN A PREVIOUSLY ASYMPTOMATIC MAN

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ABSTRACT

Introduction: Thyrotoxic periodic paralysis is a rare complication of thyrotoxicosis presenting as sudden onset of weakness of both lower limbs and sometimes of all four limbs. The complication can occur in a patient with other symptoms of thyrotoxicosis or previously asymptomatic individual.

Case report: We report the case of a 40 year old male who presented with sudden onset of weakness of both lower limbs with no sensory or bladder symptoms. On examination, patient had a power of 2/5 in both lower limbs, hypotonia and absent reflexes.

Investigations: The serum potassium was 2.2meq/l and thyroid function tests revealed hyperthyroidism.

Results: The patient was treated with injection potassium chloride which improved the serum potassium level. Concurrent to the improvement in serum potassium, power of lower limbs also improved. He was then started on methimazole and beta blockers.

Discussion: Thyrotoxic periodic paralysis is a rare complication of thyrotoxicosis, more common in Asian males. It can occur in individuals with few or no clinical features of thyrotoxicosis.

Conclusion: Thyrotoxicosis should be kept in mind while evaluating a case of hypokalemic periodic paralysis as treatment for the same can prevent future recurrences.

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INTRODUCTION

Hypokalemic periodic paralysis is a disorder characterized by acute generalized muscle weakness and hypokalemia. It is mainly due to two causes. Familial hypokalemic periodic paralysis which is an autosomal dominant disorder presenting in adolescence and usually before the age of 30years. Thyrotoxic periodic paralysis is the most common acquired form of periodic paralysis and typically presents in men of Asian descent, although it can occur in other ethnic groups as well.

Case report

We report the case of a 40year old male patient who presented with sudden onset of weakness of both lower limbs. There was no h/o sensory disturbance or urinary incontinence. There was no h/o back pain or radiating pain to both lower limbs. No h/o trauma, injury or fall. Not a known case of hypertension, diabetes.

On examination- HR-112/min, BP – 110/70mmHg

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CVS- S₁S₂ heard normally RS- B/L NVBS P/A- Soft

CNS- patient conscious and oriented, pupils-BERL, no cranial nerve deficit. Power in upper limbs- normal lower limbs- 2/5 B/L. Reflexes- absent in both lower limbs, plantar- B/L mute. Investigations – blood routine, urine routine, renal function tests were normal. Serum electrolytes revealed potassium of 2.2meq/l. thyroid profile revealed- TSH- 0.01 T₃-T₄- The patient was treated with inj. Potassium chloride and his s.potassium improved to 3.6meq/l. Concurrent to improvement of S.K⁺ level, the power of lower limbs also improved. He was adviced to avoid stressful exercise and a high carbohydrate diet. Patient was then started on tab. Methimazole and propranolol.

DISCUSSION

Thyrotoxic periodic paralysis is a rare complication of thyrotoxicosis, more common in Asian males. It can occur in individuals with few or no clinical features of thyrotoxicosis.

Conclusion

A routine thyroid function test in every case of hypokalemic periodic paralysis can identify cases of thyrotoxic periodic paralysis.

Thyrotoxicosis should be kept in mind while evaluating a case of hypokalemic periodic paralysis, as treatment for the same can prevent further recurrences.

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