

INTRODUCTION

Sudden onset lower limbs paralysis is a rare presentation among young patients. This case report focuses on a young gentleman with hyperthyroid periodic paralysis which was related to hypokalemia.

CASE DESCRIPTION

31-year-old gentleman presented with sudden onset bilateral lower limbs weakness. The weakness started since he woke up from bed after a carbohydrate-rich supper. Bilateral upper limbs weakness commenced afterwards.

Upon arrival to Emergency Department, he was alert and conscious. On examination, bilateral lower limbs shown no power while bilateral upper limbs have power 3 out of 5.

CT BRAIN was done with no significant finding. SERUM POTASSIUM was found to be 1.6 mmol/L.

ECG shown prominent U wave most obvious at LEAD V2-5. Further work up was done. It was noted that the thyroid function test demonstrated picture of hyperthyroidism.

Patient was treated with IV potassium correction and IV drip with potassium supplementation. Subsequently, patient regained his motor function completely. He was started on carbimazole upon discharge from medical ward.

DISCUSSION

Hyperthyroid Periodic Paralysis (HPP) is typically presented among Asian male, aged between 20 to 40 years old(1). Although hyperthyroidism remained less popular among male population, it should be ruled out when encountering patient with periodic hypokalemic paralysis of unexplained cause.

Patient usually experienced the paralysis in morning or after a carbohydrate-rich meal which are in consistent with the history of presenting complain in this case(1). Activity of Na-K-ATPase in proximal convoluted tubule of nephron is increased under the influence of high thyroid hormone(1). Elevated sodium reabsorption and potassium excretion result in hypokalemia.

Presence of prominent U wave in ECG should alert the clinician before progression into life-threatening Torsades de Pointes. Periodic paralysis recovered promptly with potassium supplementation.

CONCLUSION

Despite the rare presentation of Hyperthyroid Periodic Paralysis (HPP), it should be always considered in young patient with sudden onset paralysis. Timely potassium supplementation and initiation of hyperthyroidism treatment are sufficient in managing the scenario.

REFERENCES

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KEYWORD

Hyperthyroid, Paralysis, Hypokalemia

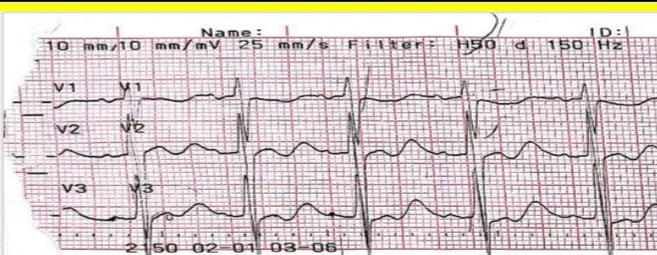


FIGURE 1: PROMINENT U WAVE IN LEAD V2-3